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Bulletin
Georgia State College of Agriculture

Announcement 1915-1916

Register, Officers and Students
Session 1914-1915

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Announcement

OF THE

Georgia State College of Agriculture

Athens, Georgia

For the Session of 1915-1916
With a Register of Officers and Students
For the Session of
1914-1915

Issued May, 1915, as Volume 3, Number 10, Bulletin 87
of Georgia State College of Agriculture.

The University extends a cordial welcome to all educational, agricultural, commercial, manufacturing, financial and industrial bodies, and bodies of like character, having for their object the welfare of the state, to use on special occasions, free of rent, such public buildings of the University as the Chancellor and President of the Agricultural College may approve.

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CALENDAR 1915-1916

June 28, Monday:	Opening of the Summer School.
July 31, Saturday:	Close of the Summer School.
September 11:	Meeting of the Faculty.
September 13:	First day of Registration.
September 13-17:	Examinations for Entrance.
September 15:	Opening of the First Term.
November 25:	Thanksgiving Day.
December 23:	Close of the First Term.
January 3:	Opening of the Second Term.
January 3:	Opening of the Short Courses.
January 19:	Birthday of General R. E. Lee.
February 21:	Exercises in commemoration of the 115th Anniversary of the Demosthenian Society and the 96th Anniversary of the Phi Kappa Society.
February 22:	Washington's Birthday.
March 18:	Close of the Second Term.
March 20:	Opening of the Third Term.
May 20:	Last date for submission of Prize Essays.
June 12:	Meeting of the Board of Visitors.
June 15:	Annual Session of the Board of Trustees.
June 14-16:	Examinations for entrance.
June 16, Friday:	4:00 P. M., Military exercises and drill.
June 17, Saturday:	8:30 P. M., Sophomore declamation contest.
June 18, Sunday:	11:00 A. M., Baccalaureate Sermon.
June 19, Monday:	10:30 A. M., Exercises of the undergraduates representing the branches of the University.
	8:30 P. M., Champion debate between the Phi Kappa and Demosthenian Societies.
June 20, Tuesday:	10:30 A. M., Business meeting of the Alumni Society.
	12 M., Oration before the Alumni Society.
	4:30 P. M., Junior orations and delivery of Sophomore cup.
June 21, Wednesday:	Commencement Day. Close of the 116th annual session.

The State College of Agriculture

HISTORICAL STATEMENT.

The Georgia State College of Agriculture was organized in accordance with an act of the General Assembly of the State passed July 21, 1906. It is an outgrowth of the State College of Agriculture and Mechanic Arts established as a department of the University of Georgia on May 1, 1872, by the Trustees of the University who accepted for the purpose, funds arising from the landscript. From time to time support was received from the federal government, until the State, realizing that agriculture represents its principal industry, decided by legislative enactment to differentiate and specifically support an agricultural college.

The act of 1906 establishing the present College and better known as the "Conner Bill," contains the following preamble which sets forth reasons for enlarging the work of the State College of Agriculture along both educational and research lines:

"Agriculture is the principal industry of the State, and the main source from which the material prosperity of the State must come. Experience has demonstrated the great value of agricultural education in permanently improving the soil, multiplying its yield and increasing the value of its products. There is a growing demand by the people of the State for agricultural education, and for the practical benefits of scientific research in this line, and for improved methods in farming."

This act provides that the State College of Agriculture shall be under the direction of a Board of Trustees, consisting of eleven men, three selected from the trustees of the University proper, three from the directors of the Georgia Experiment Station, including the Commissioner of Agriculture, and five from the State at large. The Board has the same functions and exercises the same authority as that of the trustees of similarly organized and coördinated divisions of the University, but is subject, in accordance with the provisions of the constitution of the State, to the general control of the University trustees.

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OF THE UNIVERSITY OF GEORGIA.

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*In Extension service.
‡*In Coöperation with U. S. D. A.

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CHARLES D. WARD, Assistant Biology.
FRANK C. WARD, Assistant Botany.
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GENERAL STATEMENT

The Georgia State College of Agriculture constitutes an integral part of the University System of Georgia, and while it has certain buildings, lands and equipment set aside for the special use of its corps of instructors and students, its work in general is closely associated with the University proper, so that agricultural students enjoy all the advantages which a great university system affords. These advantages include instruction and advice from the professors in other colleges, use of the general libraries and scientific laboratories, and membership in the various class and society organizations. This is most desirable, since class-room training is but a part of a man's education.

OBJECTS OF THE COLLEGE.

The purpose and plan of the College of Agriculture are, first to train agricultural students in the sciences pertaining to correct farm practice that they may receive a thorough and liberal education; second, to so arrange the course of instruction that men of limited means, opportunity and education may receive the greatest practical benefit by attending courses of varying length provided by the College; third, to take an active part in the dissemination of agricultural knowledge among the farmers of the State by means of extension teaching, farmers' institutes, bulletins, and other publications of a popular and practical nature.

THE AGRICULTURAL HALL.

The Agricultural Hall was dedicated January 18, 1909, with appropriate ceremonies. The building is 264 feet long, 72 feet wide, three stories high. It is constructed of cream-colored pressed brick, Bedford limestone for the foundation, terra cotta trimmings in designs symbolical of the purposes of the building, eaves wide and roof of red tile. The structure contains 60,000 square feet of floor space, has sixty large rooms, comprising administration offices, department offices, private laboratories. library, class laboratories for the departments of agronomy, animal husbandry, dairy husbandry, cotton industry, horticulture, farm mechanics, veterinary medicine, bacteriology, entomology, agricultural chemistry; class room and quarters for extension work, for farm demonstration work, boys' corn and pig clubs, girls' canning and poultry clubs, and an auditorium with a seating capacity of 400.

The building is heated by steam, lighted by electricity, is kept comfortable, clean and sanitary. Shower baths and lockers are provided for students whose laboratory work in shop or field require these conveniences.

CAMPUS OF COLLEGE OF AGRICULTURE.

The campus of the College of Agriculture is situated about half a mile south of the administrative building of the University of Georgia. The Agricultural Hall occupies a commanding position upon the brow of a hill, the surrounding grounds presenting unusual advantages for landscape gardening and the making of a beautiful campus. Model roads and walks are being perfected, trees and shrubs have been planted to supplement those nature has already provided, and the art of landscape gardening is being applied as means and time will admit.

AGRICULTURAL LIBRARY.

The library and reading room occupy large, well lighted rooms on the main floor of Agricultural Hall. A good, modern agricultural library has been established, consisting not only of important books recently issued, but a practically complete set of bulletins, appertaining to agricultural subjects, of all the states and departments of the Federal government; encyclopedias, herds and flock books, and bound volumes of leading publications.

About one hundred publications including the leading agricultural journals of this and foreign countries; scientific and trade papers bearing upon agriculture, a few popular magazines and leading daily and weekly papers of the state, are placed in the reading room for use of the students.

The library is open for use of students from 9 a. m. till 6. p. m. on week days, and books, not on the reserve shelves, may be borrowed for a period of two weeks.

AGRICULTURAL LABORATORIES

Since the success of instruction in agriculture depends largely upon the thoroughness and efficiency of laboratory training, the equipment of an institution in this respect is important. Below will be found a brief description of these laboratories.

AGRONOMY LABORATORY.

Three laboratories in the east end of the main building are used by the department of agronomy. The soil laboratory is completely equipped with soil tubes, shakers, centrifuges, water baths, ovens, distillation apparatus, scales, etc. This laboratory is used in a series of experiments to give the student a knowledge of the physical and mechanical qualities of various types of Georgia soils.

The cereal laboratory is used for the study of farm crops, including seed testing and cereal judging. Laboratory tables, seed racks, seed testing apparatus, seives, magnifiers, microscopes and wall cases containing specimens, constitute the main equipment of the laboratory.

The cotton industry laboratory is equipped to teach students how to distinguish the varieties, how to grade, how to make close physiological study of the fibre under the compound microscope and how to meet some of the milling problems of fibre through breeding, etc. Varieties are combed and mounted, individual merits ascertained, the breaking strength of varieties determined, etc.

ANIMAL HUSBANDRY LABORATORIES.

About seven thousand square feet space in the basement of Agricultural Hall, is set aside for laboratory work in theoretical and practical instruction in dairying. In the butter making laboratory are various makes of separators, both hand and power which the students are required to set up and operate, thus giving them a first hand knowledge of the type best suited to their farm needs. The laboratory has been equipped with reference to the home dairy rather than a creamery. The milk testing laboratory is a large, well lighted room in which several models of Babcock testers are used. Various methods are used for determining the adulteration of milk. Facilities are also provided for determining the solids not fat, as well as how to make curd tests.

A pasteurizing laboratory in which students are taught how to meet the highest sanitary requirements as well as how to prepare

dairy products for storage and long shipment, is provided. Refrigerating facilities in which temperature requirements are met in ripening, storing and holding of different dairy products, will be afforded for laboratory work of this nature.

Students are provided herd books and taught how to trace pedigrees as well as the use of forms for tabulating and keeping them. Various breeds of live stock on the farm are used for stock judging, breeding and feeding experiments.

HORTICULTURAL LABORATORIES.

The department of horticulture has three laboratories. A student laboratory and a private laboratory are in the Agricultural Hall, and the third, a spraying laboratory on the horticultural grounds, situated about 400 yards southeast of the main building.

The students' laboratory is equipped with various models, microscopes, samples of horticultural tools, etc. The private laboratory contains a culture room, fume hoods and other essential fixtures for research work in horticulture. Between the two laboratories is the office with vault apartment for records. A barn, tool shed and spray house constitute a part of the equipment for students' field work.

Greenhouses. The College greenhouses consist of three houses each 75 feet long, and 25 feet wide, divided into seven compartments so that practical, experimental and class work can be carried on in them at the same time. The structures are semi-steel, the three being connected with a metal-lathe concrete work room. The plans for the development of the greenhouse plant provide that the present unit shall constitute only a wing of the future structure.

FARM MECHANICS LABORATORIES.

The Farm Mechanics laboratories are located in the east portion of the lower floor of the main buildings and in the Farm Mechanics building.

The laboratory room in the main building is 33x70 feet and is used for drawing and surveying, being equipped with 50 drawing tables with parallel attachments, print frames, etc. Besides being used for student instruction, this laboratory is also used for making blue print drawings of barns and farm buildings in general.

The surveying equipment is sufficient to put ten parties in the field and consists of five Bustrom and Brady farm levels and compass combination instruments, and five Keuffel and Esser combination farm transits, convertible engineering level, nine plane tables, and a transit for advanced work and all other necessary surveying accessories.

Farm Machinery Laboratory. The farm machinery laboratory is located in the Farm Mechanics building, occupying the whole of

the second story. A full line of modern farm machinery is on display and is used for student work. Pumps, hydraulic ram, windmill and gasoline engines illustrating different forms of water supply. Acetylene and its adaptability for lighting, heating and cooking on the farm, is demonstrated. Plumbing appliances required on the farm, constitute a part of the equipment.

Forge Shop. The forge shop is located on the ground floor of the Farm Mechanics building, is equipped with twelve latest models heavy cast iron forges with coal and water boxes and a full line of tools. The blast and exhaust of the forges are produced by fans electrically driven. Vises, drills, emery wheel, polishers, grinders, etc., are provided.

Wood Shop. The wood shop is also located on the ground floor of the Farm Mechanics building, occupying the same amount of space as the forge shop. The equipment consists of benches, planer, matcher, rip and cut-off saw, turning lathe, and a full set of tools and attachments for each bench.

Display and Assembly Rooms. Between the wood shop and forge shops is the display, assembly, supply, and tool room. Besides providing racks for tools for both the forge and wood shops, the room is used by the students for putting together furniture and for the display of models for farm buildings, silos, etc.

VETERINARY SCIENCE LABORATORIES.

The laboratories of this department occupy a portion of the main floor of Agricultural Hall and consist of three main rooms with storage room connections. The histological and pathological laboratory is furnished with biological desks, microscopes and other instruments and accessories necessary to the work. A wall cabinet contains specimens and models of diseased organs and parts. Surgical instruments and cabinet furnish a part of the equipment of the laboratory.

A small room is fitted up as a pharmacy with complete line of veterinary drugs and medicines together with percolaters, filters, mortars, pestles, scales, pill tiles, a case of two hundred crude drugs, etc., for use in the study of Materia Medica and Pharmacy.

The bacteriological laboratory for the study of disease producing germs is equipped with biological desks, high-power microscopes, microscopic slides, cabinets, steam and hot air sterilizers, incubator, culture media and all necessary accessories. A specially constructed, inside room adjoins this laboratory, used for incubation purposes and is fully equipped.

The facilities of this department will be greatly increased with the completion of the new veterinary building, now in course of erection.

Skeletons, models and charts of farm animals are available for study of anatomy, aside from opportunities furnished by carcasses of animals at the hospital.

Veterinary Hospital. The veterinary hospital is provided with box stalls for sick animals, bath stall, clinic room, operating room, dissecting room, office and dispensary, and room for attendant. A complete equipment of hopples, side lines, slings, casting harness, dental, operating and obstetrical instruments and appliances is provided. Clinics at which sick or injured animals are treated free of charge, are held at stated periods during the school year. Students are trained in the diagnosis and treatment of diseased animals, required to prepare and administer medicines by various methods, take proper care, and maintain correct hygienic conditions. Score cards are used for examinations of animals for diseases, unsoundness and blemishes.

The dissecting room is used during the colder months for the study of anatomy and physiology, students being required to dissect and study various parts of farm animals, and observe the location of internal organs, the principal blood vessels, nerve and other structures.

Hog cholera serum is manufactured at the hospital and affords frequent opportunities for autopsies of hogs, and, therefore, a study of contagious and parasitic diseases.

Hog Cholera Serum. The General Assembly of Georgia made an appropriation in 1911 for manufacturing Dorset-Niles hog cholera serum and continues to maintain the work, employing the veterinary department of the College to this end, that students may be better instructed concerning swine diseases and the manufacture and administration of the cholera serum. The serum is manufactured and supplied at cost to owners of swine through the office of the State Veterinarian at the state capitol. The serum plant has been enlarged to meet the increased demand, a modern, sanitary hog house sufficient to house 60 hogs, being added. Additional laboratory room will be provided in the new veterinary building now being erected.

AGRICULTURAL CHEMISTRY LABORATORIES.

The courses of instruction offered in this department are designed to prepare students for practical work. Well equipped laboratories are necessary that this may be done.

The laboratories occupy the west end of the top floor of the College building, the main laboratory being well ventilated and lighted from three sides. These laboratories are well equipped with new and modern desks, hoods, tables for microscopic work, and appar-

atus accommodating sixty to seventy-five students. Adjoining the main laboratory is a well-lighted balance room equipped with accurate balances.

Adjoining the instructor's office is a private laboratory separated from the main laboratory by the store-room which opens into both laboratories. This laboratory is equipped for the analysis of soils, feeds, fertilizers, waters, etc.

Each desk in the laboratory is supplied with gas, water and sinks. Ample facilities are offered for students to specialize in the different branches of analytical work, such as soils, feeds and other agricultural products.

A laboratory has been equipped with modern apparatus for the analyses of the soil types of the state. The department is conducting a soil survey of the state in coöperation with the Bureau of Soils. All types in the several counties surveyed are collected and sent to the laboratory for chemical analyses.

GEORGIA STATE FOREST SCHOOL

The object of the school is national and state service. To this end, a four-year course is given in technical forestry and allied subjects to those who desire forestry as a profession, short practical courses for those students in agriculture who desire general knowledge as to the management of small tracts of timberland, direct assistance to residents of the state in the management of forest property, and general research along the line of problems now confronting the state.

In the four-year professional course, opportunity is given to specialize in certain main lines and provision is made for six hours of elective work throughout the Junior and Senior years. For those students desiring to specialize in City Forestry an opportunity is offered for the election of Landscape Gardening and allied subjects; for those desiring to specialize in technical forestry, with the object of entering the federal or state service, the election of advanced courses in Botany and Forestry; for those desiring to specialize in Lumber Salesmanship and Mill Superintendency, the election of courses in Economics and Business Administration; for those desiring to specialize in Dendropathology, the election of advanced courses in Botany.

At the beginning of the Junior year students are required to make a selection of the elective courses they desire to pursue, subject to the approval of the director of the Forest School to insure the proper correlation of work.

FOREST SCHOOL LIBRARY AND MUSEUM.

The Forest School occupies a three-story stone building adjacent to the main agricultural building. This has been equipped with laboratories, class-rooms, offices and museum. The library contains copies of the important books relating to forestry, a complete file of the Forest Service circulars and bulletins, and a complete file of literature relative to state, coöperative and association forestry. Forty-five forestry, lumber, trade and woodcraft journals are to be found in the library.

The museum consists of a collection of logging tools, mill machinery, forestry instruments and wood and tree specimens.

The Forest Garden includes a nursery of three acres where seedlings of the various species of tree growth which will thrive in Georgia are grown. In this garden are conducted a series of experiments to determine the effect of heredity upon seed; influence of source of supply on seed; and the influence of methods of planting. A twenty-acre woodlot adjacent to the School furnishes a natural arboretum, more than sixty species of native trees and shrubs being represented. From time to time other specimens are added and it is planned that during the next year there will be found growing in the arboretum all trees and shrubs which will thrive in Georgia.

SUMMER CAMP.

Following the Freshman and Sophomore years a Summer Camp is provided on a large timbered area in northern Georgia. The camp continues two months and will be conducted as an extra term of the College course. The work is decidedly practical, the object being to provide for the proper correlation of class-room theory and woods practice. Camping equipment is provided by the School and the student has little expense outside of transportation to and from the camp, and the actual cost of board.

From time to time special lecturers are provided.

THE COLLEGE FARM

Contiguous to the grounds of the main building and extending southward for more than a mile, lies the College farm, consisting of 830 acres. The land is of varied character as to physical condition, types of soil and fertility. Some of it is rough and broken, a part fairly level, and a portion well wooded. This diversity admits of tests applicable to types of soils and conditions found in many sections of the state and is, therefore, an advantage.

Previous to being taken over by the College, the land had been rented and handled in a careless manner. No crop rotation system

had been followed, very little livestock had been kept, and as a result the land was eroded in many places and was very generally in poor physical condition. This condition is not unlike that of a vast acreage in Georgia, and it has been of advantage in affording a basis of practical instruction in soil building by crop rotation, the use of legumes, growing live stock, terracing, etc.

The farm has been surveyed and mapped with a view to the construction of roads, bridges, walks, and additional buildings, as funds become available. A survey has also been made of the soil types, to determine their physical characteristics.

College Barns. As funds have become available the College has erected plain, but substantial barns after plans prepared by the Department of Animal Husbandry and drawn by the Farm Mechanics Department. Their low cost and general untility have made them popular among farmers. The College has combined its general stock barn and dairy barn which heretofore have been separate pending the acquirement of sufficient funds to develop this more economical plan. The barn for dairy and general live stock consists of one large hay and grain barn with two stall extensions, modernly equipped for economical feeding and sanitary housing of cattle and horses. The dairy portion is completely equipped for the most careful and scientific handling of the products of the herd.

Two silos, one with a capacity of 150 tons and another of 200 ton capacity are used at this barn.

The Department of Agronomy has two barns for storage and laboratory work located on the experimental plats. These are completely equipped for the purpose. The Horticultural Department has a barn on the horticultural grounds, new and well equipped. These and the tool sheds, bull houses, paddocks for young stock, dipping vats for hogs and cattle constitute in the main, the barn facilities of the College.

LIVESTOCK.

Dairy Herd. With a small beginning commensurate with the sum available for the purpose, the College began in 1907 to establish its dairy herd, and has increased it from 17 to 40 Jerseys and from 0 to 27 Holsteins. A pure bred bull of each breed is owned. Of the Jerseys 18 are pure bred and of the Holsteins 14 are pure bred. Some high producing cows have been developed and the production and profits per cow has been materially increased.

Beef Herd. A Hereford herd of 54 head is being pastured during grazing season on a portion of the College farm which had been abandoned for crop purposes because of its eroded and depleted condition. A valuable object lesson is thus being afforded as to how to utilize waste lands and reclaim them for crops. An object lesson is

also afforded as to how good beef types can be developed with native cows by use of a pure bred sire.

The Shorthorn herd consists of a herd bull and 8 females. Most of the cows are of the dual purpose type and are ideal farmers' cows.

Hog Herd. Tamworths and Berkshires are being bred on the College farm as representatives of the extreme types of bacon and lard producing hogs. Offsprings of these animals are being widely distributed in the state for breeding purposes.

Work Stock. Percherons for draft stock are being emphasized at the College. Two registered mares are now owned by the College as well as a registered stallion and some grade mares. This kind of farm power equipment is being added as fast as means will admit. Various types of mules are also used. The Colleges has in all 26 head of horses and mules.

Horse Breeding. Aside from the registered Percheron mares and the pure bred stallion, and excellent grade mares as a foundation for breeding work on the farm, the College has been able to interest various communities in the state in buying Percheron mares and stallions. When funds are obtained, quite extensive plans will be put in force for assisting the farmers of the state to get better breeds of not only horses but of beef and dairy cattle.

THE DEMONSTRATION TRACTS.

A field of twenty acres has been set aside for experimental work. This area of land has been subdivided into more than 1,000 plats, ranging in size from $\frac{1}{50}$ to $\frac{1}{10}$ of an acre. Through the medium of this experimental field, nature is constantly being asked questions, and new facts of interest are being brought to light by actual field tests; the value of principles and theories developed through laboratory research is determined, and thus the education of the student is made more complete, since he not only receives instruction in theory in the class-room, but has the underlying scientific principles fully demonstrated to him in the laboratory, and sees the actual results which follow the application of these principles in farm practice.

Much attention is given in the demonstration field to the development of strains of cotton, corn and other farm crops into better kinds than those ordinarily grown. The relation of fertilizers to crop production, the influence of various methods of cultivation, the value of crop rotations, and the merits of new and interesting varieties of farm crops are fully tested, and not only made a part of the knowledge of the student, but the results are distributed free of cost to the farmers of the state.

In connection with the work in Cotton Industry, special plats are set aside for conducting experiments in cotton breeding, both by selecting and hybridization, and students are given opportunity to see the results of their own experiments. A test of all the leading varieties of cotton is also conducted. During the growing and harvesting seasons, students are required to write full descriptions of varieties, and be able to distinguish one from another.

A ten acre tract in Brooks county and a similar area in Turner county are used for experimental work in variety tests for south Georgia conditions.

In twenty-seven other counties of the state, three-acre tracts are used for fertilizer tests.

ORCHARDS AND GARDENS.

About thirty-five acres of the College farm have been set aside for horticultural purposes. The land is rolling, and, with the exception of one or two acres of sand, which will serve well for truck crops, the soil is red clay. The field has been plotted and a variety orchard planted, in which all the varieties of apples, pears, peaches, plums and other fruits recommended for this section are well represented, so that a comparative study of their qualities can be made. As rapidly as funds will permit, a truck garden is being developed, experimental plats laid out, and a commercial orchard started. A plantation of small fruit is already well established. For the benefit of the fruit growers at large, the horticultural grounds will serve as a testing field for all new varieties, and also as a laboratory for experiment in and demonstrations of all practices of orchard and garden management for the benefit of the student.

STUDENT ORGANIZATIONS

THE AGRICULTURAL CLUB.

The students of the College have an organization of their own, known as the Agricultural Club, which meets every week. The purpose of the society is to obtain drill in parliamentary practice, and in declamation and debate, as well as to discuss the scientific and practical phases of many important agricultural problems. The club publishes the "Agricultural Quarterly," which is not only distributed among the students, but is circulated over the state. This publication forms a desirable medium of communication between students and farmers, and furnishes useful literary training to students.

HORTICULTURAL CLUB.

The students interested in horticulture have a club which meets semi-monthly for the discussion of live problems in that field of

agriculture. At the 1912 meeting of the State Horticultural Society the student members of the College Horticultural Society were rated active members of the state organization upon the payment of fifty cents as annual dues to the state society.

FOREST CLUB.

The Forest Club is an organization of the students in the Forest School. Meetings occur regularly on Wednesday evening of each week. The object of the club is four-fold: 1. To keep its members informed on current literature; 2. To give its members opportunity for practice in public speaking and argumentation; 3. To bring its members in contact with men prominent in forestry and allied subjects through providing for these men to address the club; 4. To promote good fellowship among the students of the Forest School.

The club publishes the Georgian Forester, an annual treating of technical and popular forestry, which is circulated among the leading lumbermen of the south, the high schools of Georgia, and the forest schools and university libraries of the United States and Canada.

FEES AND EXPENSES

Attention is called to the remarkably low cost of a full collegiate year in the College. By rooming in the dormitories, a young man can live at the University almost as cheaply as at home.

The expenses are as follows:

Room rent in College dormitories, $2.50 per month; this includes electric lights, heavy furniture and care of room. The students provide fuel, mattress, bed furnishings and toilet articles. Board in Denmark Dining Hall costs about $10.00 a month on the co-operative plan. Room rent and board are paid monthly. Furnished rooms in private families may be secured at $3.00, $5.00 or more per month for each occupant.

The Board of Trustees reserves the right to charge a sufficient fee in all laboratories to cover actual expenses of materials used and breakages incurred. This fee varies from $2.50 to $3.00.

Laundry will cost about $1.25 a month, and books about $12.50 a year. All students are required to join one of the literary societies, the initiation fee being $2.00.

Uniforms for the military department will cost about $25.00. These will last two or three years.

In short, the necessary expenses of a student for the college year of nine months, need not exceed $175.00 to $200.00.

AGRICULTURAL PUBLICATIONS.

A number of popular bulletins are issued each year for distribution among the farmers of the state, giving information which the farmers seem to be most in need of at the time. They are not technical but convey in popular language the results of experiments carried on at the College, or acquired from other reliable sources. Special stress is being given in these bulletins to providing the Georgia farmer with the information he is now seeking to enable him to diversify his farming and abandon the policy of a single crop.

A press service is conducted by an editor of the College. This amounts to about 200 columns of reading matter per week. Practically all of the dailies and weeklies of the state use it. The weekly papers are provided a free plate service, or plates of prepared type. In the two ways mentioned the College is reaching the bulk of reading farmers in the state with timely agricultural information, on an average of once a week during the school session.

LIST OF PRIZES, 1915

Junior Scholarship—$50.00 in gold given by the Virginia-Carolina Chemical Co. to the student showing the greatest proficiency in all agricultural subjects for the college year 1914-15.

Sophomore Scholarship—$40.00 in gold given by the Virginia-Carolina Chemical Co. to the students showing the greatest proficiency in all agricultural subjects for the college year 1914-15.

Freshman Scholarship—$25.00 in gold given by the Virginia-Carolina Chemical Co. to the student showing the greatest proficiency in all agricultural subjects for the college year 1914-15.

One-Year Course—$25.00 in gold given by the Virginia-Carolina Chemical Co. to the student showing the greatest proficiency in all agricultural subjects for the college year 1914-15.

Trustee Prize—$25.00 in gold from the Board of Trustees to the student writing the best essay on "The Benefits which May be Anticipated from the Employment of County Agents."

$25.00 in gold given by the American Coal Products Co. to the student writing the best essay on "Sulphate of Ammonia as an Economic Source of Nitrogen, and Its Use in Agriculture."

$25.00 in gold given by the Virginia-Carolina Chemical Co. to the student writing the best essay on "Fertilizers as Affecting Cotton Production."

$25.00 in gold given by the Cotton Seed Crushers' Association of Georgia for the student writing the best essay on "The Influence of Cotton Seed Products on Southern Agriculture."

$10.00 in gold given by H. G. Hastings & Co. to the student writing the best essay on "Increasing the Yield of Southern Crops by Seed Selection."

$10.00 in gold given by H. G. Hastings & Co. to the student writing the best essay on "Increasing Soil Fertility by Leguminous Crops Suited to Southern Conditions."

Separator given by the DeLaval Separator Co., to the student showing the greatest proficiency in dairy work.

Bale of cotton given by Mr. Adrian Iselin, Jr., of the Southern Railway Company, proceeds of which are to be divided into two prizes for the best essays based on original data collected during vacation and submitted to the Agricultural Quarterly before January 1, 1916.

Bale of cotton given by Mr. Alfred P. Thom, General Counsel of the Southern Railway Company, proceeds of which are to be divided into two prizes for the best essays written by undergraduates on "Factors other than Yield which should be Considered when Making Selections of Cotton."

SCHOLARSHIPS.

Two scholarships valued at $250 each given by the Southern Railway Company.

One scholarship valued at $250.00, given by H. G. Hastings and Company, Atlanta, Ga.

One scholarship valued at $100.00, given by Hon. Gordon Lee.

One hundred and sixty scholarships for corn club boys' short course were given in 1914 and will be given in 1915.

Seventy scholarships for the canning club girls' short course were given in 1914 and more will be offered in 1915.

TERMS OF ADMISSION.

Students must be 16 years of age.

Four-year Degree Course: Admission to the four-year degree course requires 14 units. A student can enter, however, conditioned in 2 units, provided he is a graduate of a school that does not give full 14 units. Certificates will not be accepted for 12 units from those schools that require 14 units for graduation.

Required Subjects.

English, 3, Geometry, 1,
Algebra, 1½, History, 2,
Foreign Language, 2 units.

Not more than 6½ units can be selected from the following: Solid Geometry, ½; Agriculture, 3; Physical Geography, 1;* Drawing, 1; Physics, 1; Physiology, ½; Botany, 1; Zoölogy, 1; Chemistry, 1; *Manual Training, 2; *Commercial subjects, (Typewriting, Shorthand, etc.), 2; Additional—History, Mathematics, English, or Foreign Language, each 1.

*Not more than three units will be allowed on freehand drawing, manual training and commercial subjects.

Only one conditioned unit will be allowed in a required subject, with the exception of foreign language, where two will be allowed. Upon entrance, conditioned students must submit plan to the president showing how they will make up these conditions. If at the beginning of the sophomore year these conditions are not removed, the head of the College will designate certain courses to be taken for their removal.

After a student has taken a college course in a subject, he cannot stand examination on that subject to remove entrance conditions, except for required subjects.

A certificate cannot be corrected after the beginning of the second term. Entrance examinations will be held at Athens and throughout the state on June 11th, 12th and 14th, and September 15th, 16th, 17th and 18th.

Summary of Work Required to Secure Above Units.

A study of English Grammar, Rhetoric, and a number of English Classics, as Shakespeare, Milton, Tennyson.

A study of Arithmetic, High School Algebra and Plane Geometry.

A study of two of the following history groups: Ancient History, English History, American History and Civics, Modern History.

A study of a foreign language. Any foreign language can be offered, but in case the student is conditioned he will be expected to take either German or French.

For further information ask for special bulletin on entrance requirements.

A unit's credit will be given for work in Physical Geography, Physics, Botany, Chemistry, Physiology, and ½ unit in Zoölogy, where the work has covered a standard text and laboratory work.

One unit will be given for work in general agriculture, and one unit each in Agronomy, Animal Husbandry, and Horticulture. In each case the student must have had the required laboratory work.

Drawings must be presented by the students who wish credit in either freehand or mechanical drawing or in the combination of the two, for one unit.

Students having finished approved courses in both wood and forge work that has covered a year's work of five periods a week of 1½ hours each, are entitled to two units, or one unit for either.

An approved course in Bookkeeping, Shorthand, and Typewriting will be accepted as 1 unit. Double periods required.

For further information in regard to entrance send for special bulletin.

One-Year Course. Students 18 years of age who have had at least three months actual farm experience are admitted to this course

without examination, at the discretion of the executive officer of the College. Students should bring with them evidence of their farm experience, otherwise they will have to be examined on this point. They must, of course, have a good common school education in order to benefit by the instruction provided, and must be diligent and faithful in the prosecution of their studies. These students are not candidates for degrees.

SPECIAL COURSE IN COTTON INDUSTRY.

The course in Cotton Industry is designed to meet the special needs of a cotton-growing section. Students who desire to specialize in the work will have the opportunity of electing any of the courses of instruction, provided they select from allied subjects a sufficient amount of work to meet the University requirements. A special course of 30 days is offered in July to all who desire to specialize in cotton grading and related subjects. Special railroad rates will be in force on account of the University of Georgia Summer School in July. Work can be taken in cotton grading and also in some other Summer School course.

FARMERS' ANNUAL CONFERENCE.

"Farmers' Week" at the College in January is designed to bring the farmers and their wives into closer touch with the work of the College, afford a better conception of the work which the institution is offering their sons and at the same time afford opportunity to acquire information for profitable application on their farms. This "open week" occurs during sessions of the short course for men, short courses for boys and girls who have proven winners in corn and canning club work, and during the annual meetings of the Georgia Dairy and Live Stock Association, the Georgia State Horticultural Society and the Georgia Breeders' Associations.

SELF-HELP.

It is the purpose of the College to encourage students to work as much of their time as possible, for both economic and practical reasons. In this way the cost to the student may be reduced considerably, and his knowledge of how to apply scientific principles in farm practice may be materially broadened. It is both important and necessary that labor with the hands should be recognized as honorable and essential to the welfare of an agricultural people.

Students in the College of Agriculture have the same opportunities of securing help from the Charles McDonald Brown Scholarship Fund as those in other departments of the University at Athens. The interest on this fund is loaned to worthy young men on condi-

tion that they obligate themselves to return it with four per cent. interest. Applications for scholarship should be made to the Chancellor of the University. A special circular of information concerning the fund and blank forms of application will be supplied on request. This fund makes it possible for many young men of limited means to secure an education.

COURSES OF INSTRUCTION

The four-year course provides for a liberal and thorough training along scientific lines in agronomy, soil fertility, animal husbandry, dairy husbandry, horticulture, forestry, farm mechanics and cotton industry. General training in chemistry, physics, botany, biology, English and mathematics is also provided. Since the field of agricultural education is so broad that it is quite impossible for a student to pursue all the courses offered in four years, certain fundamental studies are prescribed, and the largest liberty of selection commensurate with the best interests of the student, is permitted. In this way the student is enabled to select a course which is in keeping with his taste, and at the same time obtain sufficient special training to fit him for the line of work he desires to pursue after graduating.

The one-year course is provided for men who have only a limited amount of time and money at their disposal, and who in many instances have not the fundamental training which would enable them to pursue a four-year course of study advantageously. Men of this class, however, can improve their knowledge and ability to manage farms and meet their problems by pursuing this course. Naturally, the training provided in this course is of a restricted and practical nature.

The three-months course and the ten-day courses and conferences are provided for those actually engaged in farming or interested directly or indirectly in it who desire to obtain the largest amount of practical knowledge which they can apply immediately and with profit, at a minimum of cost. These courses confer great benefits upon all who pursue them, and are to be commended particularly to men varying in age from 25 to 60 years who have not had the benefits of agricultural training in the past, and are therefore at a loss to know where to look for information and very often how to apply it successfully even after they have acquired it.

BACHELOR OF SCIENCE IN AGRICULTURE

The degree of Bachelor of Science in Agriculture is conferred on those who complete the four-year course. Those who desire special information relative to any part of the course may obtain it by writing to the college authorities. An outlines of the degree course is as follows.

Freshman.		Sophomore.	
Agronomy 1, 2,	2 hrs.	Anmal Husb. 2, 3, 4 and 5	4 hrs.
Animal Husbandry 1,	1 "	Botany 1,	3 "
Farm Mch. 1, 2, 3, 4, 5,	3 "	Agr. Chemistry 1 and 1a	4 "
Horticulture 1, 2 and 3,	3 "	History 4a, or 2a and Eco. 2	3 "
English 1,	3 "	English 2,	3 "
Chemistry 1,	3 "	Physics 2,	3 "
Mathematics 1 and 2,	3 "	Veterinary Science 1, 2,	3 "
Military Science	1 "		
	19 hrs.		23 hrs.

GENERAL AGRICULTURE.

Junior.		Senior.	
Agr. Chem. 2b and 3b,	4 hrs.	Agr. Chemistry 4b,	4 hrs.
Agronomy 5, 6	4 "	Animal Husb. 6, 7,	2 "
Agronomy 3,	3 "	Veterinary Science 3, 4	3 "
Farm Mch. 6, 7,	2 "	Cotton Industry 4, 5,	3 "
Horticulture 10,	1 "	Farm Mech. 8, 9,	1½
Bacteriology } Entomology }	3 "	Forestry	1½
Elective	4 hrs.	Elective	6 hrs.
	21 hrs.		21 hrs.

AGRONOMY.

Junior		Senior.	
Agr. Chem. 2b and 3b,	4 hrs.	Agr. Chemistry 4b,	4 hrs.
Agronomy 5, 6,	4 "	Agronomy 7 and 8,	3 "
Agronomy 3,	3 "	Agronomy 11,	1 "
Cotton Industry 4, 5,	3 "	Cotton Ind. 7 and 8,	4 "
Bacteriology } Entomology }	3 "	Farm Mch. 6, 7,	1½
		Forestry 3,	1½
Elective	4 hrs.	Elective	6 hrs.
	21 hrs.		21 hrs

ANIMAL HUSBANDRY.

Junior.		Senior.	
Agr. Chem 2b and 3b,	4 hrs.	Agr. Chemistry 4b,	4 hrs.
Animal Husb. 6, 7,	2 "	Animal Husb. 8, 9,	6 "
Vet. Medicine 3, 4,	3 "	Vet. Science 5, 6,	3 "
Agronomy 5, 6,	4 "	Farm Mech. 8, 9,	1½
Farm Mech. 6, 7,	2 "	Forestry 3,	1½
Bacteriology } Entomology }	3 "	Elective	6 hrs.
Elective	3 hrs.		
	21 hrs.		22 hrs.

HORTICULTURE.

Junior.		Senior.	
Agr. Chemistry 2b, 3b, or Botany 9,	4 hrs.	Agr. Chem. 4b, or Bot. 6,	4 hrs.
Farm Mech, 6, 7,	2 "	Hort. 11, 14, 15 or 16,	3 "
Hort. 4, 5, 6, 7, 9, 10,	6 "	Horticulture 12,	3½
Agronomy 5, 6,	4 "	Cotton Ind. 4,	1½
Bacteriology	1½	Farm Mech. 8, 9,	1½
Entomology	1½	Forestry 3,	1½
Elective	3 hrs.	Elective	6 hrs.
	22 hrs.		21 hrs.

CHEMISTRY.

Junior.		Senior.	
Agr. Chem. 2, 3,	9 hrs.	Agr. Chemistry 4,	9 hrs.
Agronomy 3,	3 "	Animal Husb. 6, 7,	2 "
Agronomy 5, 6,	4 "	Farm Mechanics 8, 9,	1½
Bacteriology	1½	Geology	1½
Entomology	1½	Elective	6 hrs.
Elective	3 hrs.		
	22 hrs.		20 hrs.

FARM MECHANICS.

Junior.		Senior.	
Farm Mechanics 10,	4 hrs.	Farm Mechanics 14, 15,	5½
Agronomy 5, 6	4 "	Animal Husb. 6, 7,	2 hrs.
Agronomy 3,	3 "	Farm Mechanics 8a,	3 "
Farm Mechanics 11, 12	4 "	Farm Mechanics 16,	3 "
Chemistry 2b and 3b	4 "	Forestry	1½
Electives	3 "	Electives	6 hrs.
	22 hrs.		21 hrs.

Foreign Language.

Students who do not present two units of a foreign language at entrance may take a foreign language in the Freshman and Sophomore years, and carry over Mathematics and Physics into the Junior and Senior years.

Those desiring to study medicine may continue the study of French and German in the Junior and Senior years, and thus prepare themselves for entrance into the highest grade medical schools of the United States.

Laboratory Periods.

In the College of Agriculture two laboratory hours count as one hour of recitation, and are included on that basis in the number of hours required.

Changes in Courses.

When changes are made in the courses, students may graduate under the curriculum in force when they enter or under the new curriculum, provided they conform to all of the requirements.

Electives.

The courses are arranged so that students may pursue a general course in the Junior and Senior years or specialize in Agronomy, Animal Husbandry, Horticulture, Chemistry and Farm Mechanics. Students who desire to specialize must elect a group in the Junior year and take the coördinate group in the Senior year. Before registering they must submit a written statement of electives for the year to the head of the department from which their group is chosen. Students who specialize will be required to write a thesis before graduation. The thesis must be on a topic related to the group selected in the Junior year.

FOREST SCHOOL COURSES

No.	Title	Credit.	Offered to	Prerequisite Courses.
1	Forest Policy	1	Senior.	Economics 5.
2	Farm Forestry (Short)	1	One Year.	None.
3	Farm Forestry (Long)	1½	Senior Ag.	Botany 1.
4	Dendrology	3	Soph.	Botany 1. Forestry 12.
5	Silviculture	3	Junior.	Botany 1, 9. Forestry 4.
6	Forest Protection	1	Senior.	Forestry 4. Forestry 11.
7	Forest Mensuration	4	Soph.	F. M. 5a. Forestry 4. Forestry 12.
8	Forest Management	6	Senior	Forest 5. Forest 7.
9	Forest Utilization	3	Senior.	Forestry 16. F. M. 7b. Ag. Chem. 5.
10	Forest History	1	Senior.	Economics 5.
11	Forest Economics	1	Senior.	Economics 5.
12	General Forestry	4	Fresh.	Botany 1.
13	Dendropathology	1	Senior.	Forestry 4. Botany 9.
14	Commercial Law	1	Senior.	Economics 5.
15	Wood Technology	1⅓	Junior.	Forestry 4. Botany 9.
16	Field Work	4	Soph.	Forestry 4. F. M. 5a.
17	Forest Seminar	3	Senior.	Forest. 4, 5, 7.
18	Thesis	3	Senior.	Forestry 17.

OUTLINE OF COURSES OF STUDY.

Freshman Year.

Subject—	Credits.
Chem. 2, Inorganic Chem.	4
Ger. 1, or Fr. 1, Grammar	3
Botany 1, General Botany	4
English 1, Composition	3
Math. 1, Trigonometry	1½
Forest. 3, Principles of Forestry,	1½
Physics 2, College Physics	4
Farm Mech. 1, Shop Work	1
	22
Freshman Summer Camp—two months:	
Forestry 12, Gen. Forestry	4

Junior Year.

Forest. 15, Wood Technology	1⅓
Farm Mech. 7b, Timber Physics	1⅓
Agri. Chem. 5, Forest By-products	1⅓
Forestry 5, Silviculture	3
Eco. 5, General Economics	3
Agron. 5 and 6, Soil Physics and Fertilizers	4
Hort. 13, Economic Entomology	1
Optional (Selected from Elective C)	6
	21

Sophomore Year.

Subject—	Credits.
Agri. Chem. 1, Org. Chem.	2⅔
Agri Chem. 1a, Qualitative	1⅓
Ger. 7 or Fr. —, Scientific Forestry,	3
Botany 9, Plant Physiology	4
Eng. 6, Adv. Composition	2
Eng. 7, Eng. Essayists	1
Farm Mech. 5a, Surveying and Mapping	4
Forestry 4, Dendrology	3
	21
Sophomore Summer Camp—two months:	
Forest. 7, For. Mensuration	4
Forest. 17, For. Field Work	4

Senior Year.

Forest. 8, Forest Managem't	6
Forest. 9, Forest Utilization	3
Forest. 10, Forest History	1
Forest. 11, Forest Economics	1
Forest. 14, Commercial Law	1
Forest. 6, Protection	1
Forest. 13, Dendropathology	1
Forest. 1, Forest Policy	1
Optional (Selected from Elective C)	6
	21

JUNIOR AND SENIOR ELECTIVES.

	Credits.	
Animal Husb. 1, Types of Breeds	1	First Term
Botany 6, Morphology and Taxonomy of Fungi	4	
Botany 8, Fungi and Plant Disease	4	
Botany 10, Ecology	4	
Bus. Admin. 1, Theory and Pract. Accounting	3	
Bus. Admin. 2, Adv. Accounting and Auditing	3	
Bus. Admin. 3, Commercial Organization	3	
Bus. Admin. 4, Industrial Organization	3	
Economics 6, Money, Banking and Credit	1½	First Term
Economics 7, Corporation Finance	1½	Second Semester
Economics 11, Labor Problems	1½	Second Semester
Farm Mech. 7a, Saw Mill Machinery	1	First Semester
Farm Mech. 8, 9, Roads and Trails	1	Second Term
Farm Mech. 7c, Wood Preservation	1	Third Term
Farm Mech. 5b, Saw Mill Construction	1	Second Term
Forest. 17, Forest Seminar	3	
Forest. 18, Thesis	3	

Hort. 19, Landscape Gardening	1	Third Term
Hort. 12, Thesis	3	
Hort. 16, Adv. Landscape Gardening	3	
Phil. 3, Logic	1½	First Semester
Phil. 4, Ethics	1½	Second Semester
Pub. Speaking, Junior-Senior Courses	1	
Vet. Sci. 8, Diseases of Stock	1	Third Term

AGRONOMY

JNO. R. FAIN, Professor.
G. A. CRABB, Adjunct Professor.
L. E. RAST, Adjunct Professor.
P. O. VANATTER, Instructor.
*R. R. CHILDS, Instructor.
S. H. STARR, Instructor.
E. C. WESTBROOK, Instructor.
PAUL TABOR, Tutor.

1. **Cereals.** The cereals studied include wheat, corn, oats, barley, rye and rice; sorghum, millet and buckwheat are studied briefly in so far as the grains are used for food. The study of these cereals include the origin, history, composition, cultivation and methods of improvement. In addition to text-book work, the cereals are grown in nursery rows convenient to the College, so that the student may study the plans first hand. The demonstration field is also used for the same purpose. Two hours. Second and third term. Freshman. *Professor Fain, Professor Rast.*

2. **Cereal Judging.** This is a laboratory course. The study begins with the seed and is followed up by the study of the mature plant and its relation to seed production. A part of this work is in the field and in the demonstration barn, so that the student is taught not only the various facts in regard to the development of the cereals, but he acquires the habit of studying these plants in the field. The demonstration field and cereals grown in nursery rows form excellent facilities for this work. The germination of corn is given especial attention, and the records in the demonstration field are used in this connection, showing the relationship between the germination and growth of the varieties tested. One laboratory period. Second and third term. Freshman. *Professor Fain, Professor Rast.*

3. **Farm Management.** Factors entering into the business of farming and maintaining farm lands are studied in their relation to each other, and to their proper influence on farm practice. Special attention is paid to ways of systematizing the business, and methods

*In coöperation with U. S. Department of Agriculture.

of maintaining the crop production of the land. In this connection a detailed study is made of rotation as adapted to Georgia conditions. Laying out the farm, methods of cropping, and records are studied. The cost of production and marketing is given special attention. The laboratory work will consist of conferences in which the results summarized from investigation by the student will be discussed. The student will be required to use "Rural Economics," by Carver, for parallel reading. Other reading assignments will be made from time to time. Two lectures and one laboratory period. Junior. *Professor Fain.*

*4. **Grasses and Forage Crops.** The different varieties of grasses and forage crops are studied with reference to their yield, composition and feeding value. Special attention is paid to those grasses and forage crops that are adapted to southern conditions. As silage is undoubtedly the cheapest form in which forage crops can be prepared in this state, considerable attention is given to the crops best adapted to silage, the best method of handling the crop and harvesting it. This course alternates with "12" and "13." Given in 1916. Two lectures and one laboratory. Junior. *Professor Fain.*

5. **Soil Physics.** A study is made of the origin of soils, the different forms of disintegration, and the physical properties of different types, especially in their relation to crop production. Laboratory experiments are required with type soils. Each student may substitute his home soil for one of the types. This should be an average sample, taken from several places of the most uniform type from his home farm and community. In addition to the text, parallel reading will be assigned. Two lectures and two laboratory periods. First half year. Junior. *Professor Crabb.*

6. **Soil Fertility.** Factors in crop production and methods of controlling these are studied with especial attention to the influence of culture and fertilization. Methods of handling the soil, so as to permanently increase fertility, rather than for temporary crop production, are emphasized. Special attention will be given to the uses of commercial fertilizers and general soil management. Parallel reading will be assigned. Two lectures and two laboratory periods. Half year. Junior. *Professor Crabb.*

7. **Soil Formations.** This course will include a study of the soil provinces of the United States, their origin and methods of formation, soil series and types and their relation to crop adaptation, with especial attention given to southern soils and conditions. Parallel reading will be required. Two terms. Two lectures and one laboratory. Senior. *Professor Crabb.*

8. **Drainage and Irrigation.** The history and development of drainage and irrigation, their economic relation, the principles and

practices of each as applied to southern soils. Parallel reading required. One term. Two lectures and one laboratory period. *Professor Crabb.*

*9. **Soil Management.** A study will be made of the principal soil types of the South and especially of Georgia, the object being to determine the value of plant food taken from the soil by various crops and to plan methods for increasing soil fertility and establishing systems of permanent agriculture. Laboratory studies will be made in the greenhouse by pot tests and soil solutions of the principal types of the state. Parallel reading required. Prerequisite, Agronomy "5" and "6." Two lectures and one laboratory period. This course will be given this year and in 1917, and will alternate with Agronomy "10." *Professor Crabb.*

*10. **Fertilizers and Manures.** This course will include the history and the development and production of the various materials used to increase crop growth. Source, manufacture, application and effect of the different materials will receive especial attention. Laboratory work will be carried on in the greenhouse to study the effect of the different fertilizing materials on plant growth. Parallel reading required. Prerequisite, Agronomy "5" and "6." Two lectures and one laboratory period. Seniors. This course will alternate with Agronomy "9," and will be given in 1916. *Professor Crabb.*

11. **Seminar.** An opportunity for the student to keep in touch with the progress in Agronomy will be given in this course. Current periodicals and recent books will be reviewed. One two-hour period. Seniors. *Professor Fain, Professor Crabb,* and *Professor Rast.*

*12. **Weeds.** Weeds prevalent in the various sections of the state will be studied with reference to their habits of growth, crop relationship and means of eradication. Time of growth, seed habits, and means of seed distribution will be given especial attention. Students will be required to make a collection of weeds and their seeds, and classify them. This course will be given only in connection with Agronomy "13," and will alternate with Agronomy "4." Two lectures and one laboratory period. One-half year. Senior. *Professor Fain.*

*13. **Seeds.** Seeds will be considered relative to their structure, production, vitality, purity, commercial grades, centers of production, and market variations. Two lectures and one laboratory period. Given only in connection with number "12" and alternating with number "4." Given in 1915. One-half year. Senior. *Professor Fain.*

14. **Farm Crops.** This course is designed to give the students an opportunity to continue the study of cereals as well as to consider crops especially adapted to the state. Experiment Station literature will be freely consulted. The records of the College field

work will be given especial attention. Definite problems with one or more of these crops will be given the students. Two lectures and one laboratory period. Senior. *Professor Fain.*

COTTON INDUSTRIES

1. Special students who wish to take work in cotton industry will be given an opportunity to become familiar with the literature of cotton. The instructor will meet with such students once a week for conference and direction. Experiment Station work in this country will receive especial attention. *Professor Rast.*

2. **Field Work for Special Students.** Field work conducted by this department will give students opportunity to get first hand information from the experiments under way. The records of the field for some years are also available. *Professor Rast.*

*3. **Production of Cotton and other Fibre Crops.** Varieties, methods of selection, planting, culture, harvesting, and marketing of the cotton crop will be considered in detail. As a matter of comparison with the cotton crop, other fibre crops will be considered. The laboratory work consists of combing, mounting, testing fibres, and grading, as well as a considerable amount of field work. Junior or Senior. Two lectures and one laboratory. *Professor Rast.*

4. **Plant Breeding.** A general course in the principles of breeding, with especial reference to technique in cotton breeding. Text, Bailey's "Plant Breeding." Supplemented by numerous references. First half year. Two lectures, one laboratory. Juniors in Agronomy and Senior elective. *Professor Rast.*

5. **Plant Breeding.** An extension of the above course which is prerequisite. A study of the methods used by the best plant breeders will constitute the greater portion of this course. A certain amount of practice both in field and greenhouse is required of each student. Two lectures and one laboratory period. Second half year. Juniors in Agronomy and Senior elective. *Professor Rast.*

*6. **Agricultural Colleges and Experiment Stations.** This course will include the history and development of the land-grant colleges and experiment stations in the United States and their relation to the advancement of agriculture, also a review of the development along similar lines in others countries. The influence of agricultural societies will also be considered. Especial attention is given to present methods in experiment station work. Three hours. One-half year. Seniors. *Professor Fain.*

7. **Research.** Cotton Industry "4" and "5" are prerequisite for this course. Further consideration is given to plant breeding in which opportunity is offered for the study of cytology of cotton and the cytological aspect of cotton breeding. Text, Punnett's "Mendel-

ism." One lecture and two laboratory periods. First half year. Senior. *Professor Rast.*

8. **Biometry.** Students have special work in correlating characters of the cotton plant. The various lines of breeding carried on at the College afford an opportunity for a study of statistical methods. One lecture, two laboratory periods. Second half year. *Professor Rast.*

Note: The following courses will not be given unless as many as five students are registered for them: Agronomy "4," "9," "10," "12," "13," "14." Cotton Iudustry "3" and "6."

ANIMAL HUSBANDRY

MILTON P. JARNAGIN, Professor.
O. T. GOODWIN, Instructor.
R. M. GRIDLEY, Instructor.
*JAS. E. DOWNING, Pig Clubs.
*C. J. GOODELL, Assistant.
*G. L. BIGFORD, Assistant.
*W. H. HOWELL, Asst. Dairy.

1. **Types and Breeds of Farm Animals.** This course includes a brief study of all the domesticated farm animals. Liberal use is made of the lantern, in order to familiarize the student with the best specimens of all the leading breeds. Practical work is given in the afternoon in the judging and handling of animals on the College farm. Two one-hour recitations and two two-hour laboratory periods. First term. Freshman.

2. **Horses, Mules and Beef Cattle.** In this course the origin, history and development of the various breeds of horses and beef cattle are studied. The adaptation of the various breeds and types to different conditions of soil, climate and environment is considered. A comparison of draft and light horses is made, and especial emphasis is laid on the adaptation of the different types of horses and mules to various kinds of work. Two one-hour recitations each week. First term. Sophomore year.

3. **Dairy Cattle.** In this course the origin and utility of the several breeds of dairy and dual-purpose cattle are studied. Their adaptation to the production of milk, butter, cheese, or to both milk and beef making are carefully considered. A comparison of the profits derived from the various breeds under different conditions of farming forms an important part of the instruction provided. Two one-hour recitations each week. Second term. Sophomore year.

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*In Coöperation with United States Department of Agriculture.

4. **Sheep and Swine.** This course embraces a study of the history and development of the various breeds of lard and bacon hogs, both of English and American origin. Especial attention is given in this course to types of hogs suited to grazing. The history of the various breeds of sheep is taken up, and comparison of the several classes made. Special emphasis is laid on growing and marketing lambs and on classifying wool. Two one-hour recitations. Third term. Sophomore year.

5. **Stock Judging.** The students receive training in the use of the score card for various classes of live stock, and study the standards of excellence as established by the several breed associations. In addition to this, they are given practical work in comparative judging and show-ring placing of various breeding and market classes of horses, dairy and beef cattle, bacon and lard hogs and fine, medium and long wool sheep. Two two-hour laboratory periods each week. First, second and third term. Sophomore year.

6. **Swine Husbandry.** A specialized study of underlying principles involved in swine production is taken up in this course. It includes class work covering the origin of the breeds of swine, their adaptation to different sections of the country, and market requirements. The principles of breeding, feeding and general herd management of hogs are studied. The laboratory work consists of practical work in judging, feeding, dipping and preparing for sale or the show ring. Practical work will be given in building hog houses, paddocks and other necessary equipment, and in planning and laying out yards and pastures for hogs. Two one-hour recitations and two two-hour laboratory periods, first term. Junior year.

7. **Principles of Dairying.** This course includes the theoretical and applied side of dairy and creamery practice. A detailed study is made of the theory of milk secretion, formation and production; separation of cream by the shallow and deep setting systems, and by the use of centrifugal machines; the natural fermentations occurring in milk, their benefit and control; the manufacturing of butter; the testing of milk and its products of butter fat.

8. **Principles of Breeding.** The principles of breeding include a consideration of selection, heredity, atavism, normal variation and fecundity. The methods of breeding studied include in-breeding, line-breeding, cross-breeding, and a review of the methods by which the best types of animals have been developed. Three one-hour recitations. Senior year.

9. **Animal Nutrition.** In this course a study of the gross anatomy and physiology of the digestive system is included. The theoretical and practical side of compounding balanced rations for maintenance, milk and butter production, fattening and growth are fully explained. Three recitations per week. Senior year.

10. **Advanced Work in Animal Nutrition.** This course is provided for advanced students in Animal Husbandry. The results of feeding tests at the various experiment stations and agricultural colleges in this and other countries are reviewed. Three one-hour recitations per week. First term. Senior year.

11. **Feeding Problems.** Qualified students will be allowed to assist in conducting feeding tests, keeping records and summarizing results of experimental feeding conducted by the Department of Animal Husbandry. They will also be expected to make analyses of the various feeding stuffs used and to determine the fertilizing value of the excreta obtained from various classes of farm animals. Three one-hour recitations per week. Second term.

12. **Economics of Animal Production.** In this course the various types and breeds of live stock are considered in their relation to the utilization of various farm crops, the productiveness of the soil and the creation of wealth in general. Three one-hour recitations per week. Third term.

13. **Research Work in Animal Husbandry.** Qualified students will be allowed to carry on investigations in Animal Husbandry under the approval and direction of the professor in charge of the department. Three hours. Senior.

POULTRY HUSBANDRY

ROY F. IRVIN, Instructor in Charge.
*D. J. TAYLOR, In charge of Poultry Clubs.

1. **Farm Poultry.** A general course covering the farm poultry industry, farm poultry house construction, feeding and management of laying stock, study of breeds best suited to Georgia farm conditions, hatching and brooding chicks, breeding the farm flock. Two one-hour lectures or recitations and one two-hour laboratory period. Third term. Juniors. Elective.

2. **Breeding and Showing.** A course in breeds and breeding, care of breeding stock, systems of breeding, characteristics of the various classes and breeds belonging to each, rules for judging, preparation of stock for the show-room. Wherever possible, the class will be given practical training in judging at the various county fairs in this state. Two one-hour lectures or recitations and one two-hour laboratory. First term. Seniors. Elective. Prerequisite Poultry "1."

3. **Incubation and Brooding.** A practical course in natural and artificial methods of hatching and brooding chicks, feeding and care of chicks, selection and care of eggs for hatching, operation of incubators and brooders. Students in this course will be required to

*In coöperation U. S. D. A.

operate an incubator during the hatching period and to feed and care for the chicks hatched until they are six weeks old. One one-hour recitation and two two-hour laboratories or their equivalent each week. Second term. Seniors. Elective. Prerequisite Poultry "1" and "2."

4a. **Feeding and Housing.** Advanced study of feeds and feeding poultry; compounding rations for chicks and laying hens; planning houses; estimating costs; laying out the poultry plant. One one-hour lecture and one laboratory. Third term. Seniors. Elective.

4b. **Marketing.** This course will be given in conjunction with Poultry "4a," and will consist of a series of lectures on market requirements for poultry produce, methods of packing poultry and eggs, candling eggs, fancy trade requirements, how to ship poultry and eggs, coöperative marketing. One lecture per week. Third term. Seniors. Elective. Prerequisites Poultry "1," "2," and "3."

HORTICULTURE

T. H. McHATTON, Professor.
J. W. FIROR, Adjunct Professor.
F. W. CRYSLER, Instructor.
R. E. BLACKBURN, Tutor.

1. **Elements of Horticulture: Fruit Growing.** A general study of location, site, frost, planting, varieties, orchard tillage and management. Three lectures per week. Required of Freshmen in fall term.

2. **Pruning and Propagation.** A course in grafting, budding and other methods of propagation; also a study of pruning with its practice and effect. A few periods are devoted to a study of varieties both for the orchard and truck garden. Laboratory course of three periods per week. Required of Freshmen in winter term.

3. **Elements of Horticulture: Truck Gardening.** A general study of the main truck crops as to planting, tillage and handling, with the addition of a study of hot-beds and their management. Three laboratory periods per week. Required of Freshmen in spring term.

4. **Small Fruits.** A study of the various small fruits of interest to the horticulturist. Three lectures a week for six weeks. Book, "Bush-Fruits," by Card. **Fruit Harvesting, Storing and Marketing.** Three lectures a week for six weeks. Book, "Fruit Harvesting, Storing, Marketing," by Waugh. Required of Juniors electing Horticulture in the fall term.

5. **Pomology and Garden Seeds.** A course in the testing of seeds and a study of the several species of fruit with their pomological classification. Book, "Systematic Pomology," Waugh, supplemented by lectures. A laboratory course of three periods per week, to be

carried with course "4." Required of Juniors electing Horticulture in the fall term.

6. **Greenhouse Management and Floriculture.** A study of the various flower crops, forcing crops and management of a greenhouse. Reference books, "Greenhouse Management," Taft; "The Forcing Book," Bailey, and "Practical Floriculture," Peter Henderson. Three lectures per week. Required of Juniors electing Horticulture in the winter term.

7. **Greenhouse Construction and Management.** A study of the different types of greenhouses and heating, construction, etc. In connection with this course, trips to florists and nurseries are taken to study the plants and greenhouses. A ground plan, end elevation, bill of material and description of heating plant used in a greenhouse required of the students at the end of this course. Actual work in greenhouse management is given. Reference book: "Greenhouse Construction," Taft. A laboratory course of three periods per week. Required of Juniors electing Horticulture in the winter term.

8. (Course dropped).

9. **Spraying.** Lectures on the history and chemistry of spraying. Practice in the making and application of spray mixtures accompanied by a study of nozzles and machinery. Three laboratory periods per week. Required of Juniors electing Horticulture in the spring term.

10. **Landscape Gardening.** A study of the various schools of landscape architecture and the plants used in producing the various effects. A problem in landscaping is given each student and a drawing showing the solution required. Three lectures per week. Required of Juniors in Horticulture and General Agriculture in the spring term.

11. **Advanced Pomology.** A course of three lectures per week throughout the year open to Seniors in Horticulture. Course "11" must be carried in conjunction with course "12." A detailed study of the practical and scientific phases of fruit growing form the basis of this course and the work is supplemented by numerous references.

12. **Thesis.** A subject relating to either course "11," "14," "15," or "16" will be assigned to the student for study. At the end of the course a thesis, stating the problem, results obtained, etc., is required of the student. A course of three laboratory periods per week throughout the year and conference hours to equal one-half hour. Required of Seniors in Horticulture.

13. **Economic Entomology.** A course in practical Entomology designed especially for use upon the farm. Special attention is paid to the identification of insects and a collection is required of the student at the end of the work. Three hours per week. Required

of all Juniors in the College of Agriculture for the last half of the winter term, and all of the spring term.

14. **Advanced Olericulture.** A course of three lectures per week throughout the year, open to Seniors in Horticulture. Carried with course "12." A practical and scientific study of the problems of vegetable culture, both out doors and under glass. Work supplemented with numerous references.

15. **Advanced Floriculture.** Three lectures per week throughout the year, open to Seniors in Horticulture. Carried with course "12." A study of the more practical and scientific problems of flowers growing both under glass and outdoors. Supplemented with numerous references.

16. **Advanced Landscape Gardening.** Three lectures per week throughout the year, open to Seniors in Horticulture and to be carried with course "12." Landscape problems of homes, cities, parks, schools, public buildings, etc., receive attention. Work supplemented with numerous problems and references.

Note. The professor in charge will not be required to give courses "11," "14," "15" nor "16" to less than five students, unless the whole Senior class in Horticulture is less than five, in which case he can put all the members of the class into the course most acceptable to them.

FARM MECHANICS

LEROY C. HART, Professor.
E. G. WELCH, Instructor.

1. **Shop Work.** *a.* **Wood Work.** This course is designed for the instruction of the student in the use, care and sharpening of all wood working tools. A carefully planned series of exercises are offered. These exercises bring into use all tools that will be helpful to the student in after life. An advanced course in wood work planned for students having had the preliminary work, will be given. This course will consist of the design and building of furniture and other articles for the home. Required of Freshmen.

b. **Forge Work.** This work is designed to familiarize the student with the building and care of coal fires, the manufacture of iron and steel, and to familiarize him with the working and handling of iron and steel. Tool-making and tempering will be given. Required of Freshmen.

2. **Drawing.** Sufficient time will be devoted to free-hand drawing to enable the student to execute readily the necessary drawings in the various laboratory courses. Instrumental drawing will then be taken up so that the student may become familiar with the use of the instruments and be able to execute rapidly and neatly any drawing of this kind that will be required. Freshman year.

a. **Forest Drawing.** Special drill in drawing topographical maps, using all topographical signs employed in topographic survey. This course is for Forestry students, but may be elected by advanced students.

3. **Farm Machinery Judging.** A study will be made of the construction and use of the various farm machines, such as are used for preparing, planting, cultivating, harvesting, storing and for home and miscellaneous machinery. Each group will be taken up separately, studied and judged. Required of Freshmen.

3*a*. **Dynamite.** As dynamite has come to be of considerable importance in agriculture, a short review of its manufacture and use will be given in connection with Farm Mechanics "3."

4. **Farm Motors.** Considerable time will be given to study and operation of the gasoline engine, the steam engine and the electric motor. This course is taken up in connection with Farm Mechanics "3." Required of Freshmen.

5. **Farm Surveying.** This work will consist of the study and the use of farm levels and compass, and plane table for terracing, leveling and the survey of farm lands, and also their use in road building. Each student will be required to make a thorough map of a plot of ground and compute its area. Required of Freshmen.

5*a*. **Forest Surveying.** An advanced course is offered in the use of the campass, level, plane table and transit, with special attention to the different uses of these instruments in topographic and reconnoissance work. The work will consist of a hasty survey of a plot of ground. Then a more careful survey will be made as a check upon the first to illustrate the difference in accuracy. This will enable the student to determine the method to be used on all future work. Work required in the Sophomore year for all Forest students, but may be elected by other students who have had Farm Mechanics "5," or its equivalent.

5*b*. **Saw Mill Machinery and Construction.** This course takes up the study of saw mill and machinery, and deals with the framing of saw mill buildings and other structures using built-up members. Forest students. Sophomore year.

6. **Fencing.** This will include a study of the strength and adaptability of various materials for fence construction. The principles of gate construction, and bracing at the corners and at sufficient points according to the condition of the ground. Junior year.

7. **Farm Building.** This course consists of the study and design of farm buildings, starting with the simple and gradually working up to the most complicated. Plans are drawn and from these, the bill of material and an estimate of the cost of the completed structure are made. Attention will be given to farm convenience and sanitation. Considerable time will be spent in studying problems

of lighting, heating, water supply and sewerage disposal for the farm home. Farm Mechanics "2," or its equivalent, are prerequisite to this course. Junior year. Fall and winter term. One lecture and two laboratory periods.

7*b*. **Wood Physics.** A study of the strength of wood under different conditions and shapes, also the physical effect of moisture, heat and preservatives upon its strength will be taken up. Required of forest students, Junior year.

7*c*. **Wood Preservation.** The primary cause of decay; factors governing the lasting powers of different species; the preservation of woods by the application of paints and oils to the surface; the impregnation with creosote and other wood preservatives; the commercial method of impregnation; description of preserving plants and the fire proofing of timber. Required of Forest students, Junior

7. **Concrete Construction.** A study will be made of the principles of concrete construction, also the material, forms, mixing, placing and tamping. Their application to farm and forest conditions and the various uses to which concrete has been put in late years will be pointed out. Special attention will be given to its use for residences, barns and its application in Forestry. The construction of fence posts from concrete will be taken up. Optional for Seniors. Farm Mechanics "2," "6" and "7" prerequisite, or their equivalent.

8*a*. **Concrete Testing.** An advanced course in the testing of cements and concretes under different conditions, shapes, aggregates and reinforcing will be given. One lecture and two laboratory periods.

9. **Road Building.** Practice work will be given in locating roads at the most desirable grades with special attention to drainage. Considerable time will be devoted to road material, and in taking tests of the various kinds. Optional for Seniors. Farm Mechanics "5" prerequisite to this course.

Note. Number "8" and number "9" will constitute half a year's work.

10. **Farm Buildings.** An advanced course in the design, location and construction of all farm buildings. The stresses in different members of a design will be carefully figured. Models will be built and tested to verify the results obtained. Government bulletins and parallel reading "Farm Buildings," Sanders Publishing Co. One lecture and three laboratory periods a week throughout the year.

11. **Farm Machinery.** An advanced course in the elements of machinery. The measurement and transmission of power. The development, use, construction and repair of all farm machinery. Text, "Farm Machinery and Farm Motors," parallel readings, prerequisite Farm Machinery "3."

12. **Farm Motors.** The sources of power for agricultural purposes. Tread and sweep powers. Steam, gasoline, air and oil engines and tractors, windmills and electric motors, as far as applicable to agricultural purposes. Texts, "Power and the Plow," "Gasoline Engine on the Farm." Parallel reading prerequisite Farm Mechanics "4." "11" and "12" constitute a year's work. One lecture and three laboratory periods throughout the year.

14. **Farm Sanitation.** An advanced course in the lighting, heating, ventillation, plumbing and drainage of farm buildings, also in methods employed for sewage disposals. Text, "Rural Hygiene," by Ogden. "Practical Methods of Sewage Disposal," Ogden and Cleveland. "Domestic Water Supplies for the Farm," Fuller. Parallel readings. Government bulletins. Prerequisites, Farm Mechanics "7." One lecture and three laboratory periods throughout the year.

15. **Drainage and Irrigation Engineering.** Drainage of farm lands, both by the open ditch and tile drainage. Methods used in making the preliminary surveys and estimates. The finished survey and report. Drainage laws and assessments. Irrigation methods in use. The application and measurement of water. Texts, "Irrigation and Drainage," by King. "Practical Farm Drainage," and "Engineering for Land Drainage," by Elliott. Government bulletins and parallel reading. Prerequisite, Farm Mechanics "5," one lecture and two laboratory periods half year.

16. **Road Building.** A continuation of Farm Mechanics "9." The economic value of good roads will be taken up in connection with a more detailed study of the problem. The location, drainage, road material, construction and road machinery will be studied. Highway bridges and culverts will be taken up. Text, "American Highways," Shaler. Government bulletins and parallel reading. Prerequisite, Farm Mechanics "5," one lecture and laboratory periods throughout the year.

17. **Agricultural Surveying.** An advanced course in use of the usual surveying instruments, with especial attention to detail and accuracy. Text, Pence and Ketchum's "Surveying Manual," and "Land Surveying," Hodgman. Prerequisite, Farm Mechanics "5." One lecture and two laboratory periods throughout the year.

VETERINARY SCIENCE

W. M. BURSON, Professor.
H. H. ROTHE, Adjunct Professor.

1. Consists of lectures and demonstrations covering the anatomy and physiology of the animals of the farm. Special attention is given to the anatomy of the horse and cow with variations occurring in other farm animals. Histology is taught by lectures and by examination of animal tissues under the microscope. Materia Medica

is taught by lectures, examination of specimens of crude and prepared drugs and medicines. First, second and third terms. Two hours per week. Sophomore year.

2. Consists of laboratory work in the above subjects. First, second and third terms. One laboratory period per week. Sophomore year.

3. Consists of lectures on Pathology, Parasitology, Theory and Practice, and Lameness. First, second and third terms. Two hours per week. Junior year. Courses "1" and "2" are prerequisites.

4. Consists of laboratory courses in Pathology and Parasitology. First and second terms. One laboratory period per week. Junior year.

5. Consists of lectures in Theory and Practice, Therapeutics, Surgery, Dentistry, Obstetrics and Contagious Diseases. First, second and third terms. Senior year. Two hours per week. Courses "1," "2," "3" and "4" prerequisite.

6. Consists of free clinics held during the school year at the Veterinary Hospital. Third term. Junior year. First, second and third terms. Senior year.

7. **Bacteriology.** This course is designed to give the student in agriculture general information concerning various important forms of germ life. Lectures and laboratory work constitute the course. The various classes of bacteria are studied, special attention being paid to soil bacteria, saprophytes and those concerned in plant and animal diseases. Laboratory work consists of study of cultures and specimens under the microscope. Two lectures and one laboratory period per week, first half year. Required of Juniors. Text: "General Biology," Jordan.

COURSE FOR STUDENTS IN FORESTRY.

8. Brief consideration of physiology and anatomy of farm animals, special attention being given to the structure and functions of the digestive system and limbs. A consideration of contagious diseases apt to be found among animals on the open range together with consideration of the most important poisonous plants and animal parasites of the United States. Collateral readings will be assigned. Two lectures and one laboratory period per week. Third term. Juniors in Forestry only.

AGRICULTURAL CHEMISTRY

W. A. WORSHAM, Jr., Professor.
L. M. CARTER, Junior Professor of Soil Chemistry.
D. D. LONG, Professor in Charge Soil Survey.
M. W. LOWRY, Instructor.

1. **Organic Chemistry.** This course consists of the study of the

classification and relation of the carbon compounds, and the preparation of the simpler and more important ones.

Stress is laid on those compounds relating most directly to agriculture, such as the organic compounds in the soil, feeds, fertilizers and organic adulterants.

Students taking this course must have had elementary Chemistry "1," or Inorganic Chemistry "2," including work in laboratory. Haskins & Macleod's "Organic Chemistry" will be used as a basis of this work. Three hours of lectures and recitations and one laboratory period during first and second terms of Sophomore year.

1*a*. **Agricultural Qualitative Analysis.** In this course a study is made of the characteristic properties and reactions of the common metals, the principles involved in the separation of the groups, and the individual metals of the respective groups. By systematic work with known substances and then with unknown substances the student is able to familiarize himself with the processes employed in qualitative analysis. Two hours of lectures and recitations and two laboratory periods during the third term of Sophomore year. Required of all Sophomores. Text: Baskerville and Curtman's "Qualitative Analysis."

2. **Agricultural Qualitative Analysis.** In this course a study is made of the characteristic properties and the reactions of the acid radicals. The course is planned to enable the student to determine the composition of all ordinary substances particularly those that are of most importance in agriculture. Two hours of lectures and recitations and seven laboratory periods during the first term of the Junior year. Text: "Qualitative Analysis," by Baskerville and Curtman. Special problems outlined by the instructor.

2*b*. Same as course "2," except students not specializing in Chemistry take two laboratory periods instead of seven. Required of students taking General Agriculture, Agronomy, and Animal Husbandry.

3. **Quantitative Analysis.** The object of this course is to prepare the student for special work in agricultural chemistry as well as to teach the method of quantitative analysis.

The methods of both gravimetric and volumetric analysis will be treated in lectures and the practice carried out in the laboratory. Substances of known percentage composition will first be analyzed and then substances of unknown composition, including the simpler agricultural products. Texts: "Elementary Quantitative Chemical Analysis," Lincoln and Walton. Reference books, "Quantitative Analysis," by Treadwell, Olsen and Fresenius.

3*a*. Same as course "3," except that students not specializing in Chemistry, have two hours of lectures and recitations and two lab-

oratory periods. Required of students taking General Agriculture, Agronomy and Animal Husbandry.

4. **Advanced Quantitative Analysis.** The basis of the work in this course will be the study of the methods employed in soil investigations, the analysis of soils, fertilizers, feeds, waters, etc. Some latitude is allowed the student as to the substances to be analyzed. Students taking this course must have had Agricultural Chemistry "3." No text-books required. Work for laboratory will be outlined and standard references given.

Two hours of lectures and recitations and seven laboratory periods for three terms during Senior year.

4*b*. Same as course "4," except that students not specializing in Chemistry have two hours of lectures and recitations and two laboratory periods. Required of students taking General Agriculture, Agronomy and Animal Husbandry.

5. **Chemistry of Forest By-products.** This course consists of the detailed study of the chemical by-products of the forest, destructive and steam distillation, the mechanical and chemical processes of paper manufacture from wood, the production of turpentine and rosin, the production of wood alcohol, acetic acid, creosote, and the possibility of further utilization of sawmill waste. Four hours during third term of Junior year. Required of forestry students.

Fees. No laboratory fees are charged for any of the courses offered in this department.

A deposit of $5.00 will be required for each laboratory course to cover breakage of apparatus. If any of this amount is left it will be returned to the student at the end of the year.

FORESTRY

J. B. BERRY, Professor.

1. **Forest Policy.** The development of policy as it is reflected in forest legislation. A study of the forest laws of all countries, special emphasis being placed on those in which the science of forestry has reached a high degree of perfection. The establishment of a policy. Text, lecture, collateral reading. Three hours, third term.

2. **Farm Forestry.** (Short Course). Elementary work in silviculture, mensuration, protection, logging and tree diseases, as applied in the management of a small tract of timberland. The utilization of forest by-products—turpentining, the production of charcoal, distillation. The production of osiers. Text, lecture, collateral reading. One laboratory period. Three hours, third term.

3. **Farm Forestry.** The development of forestry in the United States; organization of the Forest Service; forest legislation; important commercial tree species; mensuration; silviculture, protec-

tion, utilization. Text, lecture, collateral reading. One laboratory period. Three hours, second semister.

4. **Dendrology.** Comprehensive study of the forest tree species of North America, botanical characteristics, range, classification, silvics. Field identification (winter and summer) of the numerous tree species represented on the College campus and in adjacent woodlands. Text, lecture, collateral reading. One laboratory period. Three hours, entire year.

5. **Silviculture.** Forest Ecology; factors of site; classification of site quality; silvicultural regions of North America and characteristic tree species of each. Silvicultural systems and methods of management; classification of systems and methods; advantages, disadvantages and application; forms of forest; artificial regeneration; structure of seed; germination and growth; seed tests; identification of seed; collection and storage; nursery practice. Text, lecture, collateral reading. One laboratory period. Three hours, entire year.

6. **Forest Protection.** Methods of preventing, fighting, and controlling fire; location and use of lookout-towers, telephone, wireless and heliograph; caches for tools and supplies; maps and plants for use in fire prevention. Text, lecture, collateral reading. Three hours, first term.

7. **Forest Mensuration.** Units of measurement; volume of single trees and standards; volume tables; growth tables; yield tables; log rules; mill scale studies; Forest Service methods. Text, lecture, field work. Junior, Summer Camp.

8. **Forest Management.** Normal forest; volume of growing stock; determination of felling budget; division of forest area; utilization of by-products; grazing; forest finance; value; determination of profit and loss; working plans. There is required of each student a detailed working plan for a specific area, the work to be done under direction of the instructor. Text, lecture, collateral reading. Three laboratory periods. Six hours, entire year.

9. **Forest Utilization.** Systematic study of logging operations in different sections of North America; character of tools used; wood transportation; comparison of costs of the various operations; labor conditions; camp, board and sanitation. Milling and manufacture; costs, markets; grading. Specialized industries; wood pulp, handles; matches; etc. Seasoning of lumber; treatment to prevent stain; dry kiln.

A report on a specific operation is required. This will be according to outline and will include the woods operations, transport, milling, manufacture, utilization of waste, marketing. Each student is required to spend not less than ten days in a logging camp and

around the mill in the collection of data. Text, lecture, collateral reading, field work. Three hours, entire year.

10. **Forest History.** An analysis of the economic conditions which have resulted in the development of forestry. The influence of form of government and property rights. Text, lecture, collateral reading. Three hours, first term.

11. **Forest Economics.** The relation existing between the practice of forestry, industry, and the prosperity of a country. Taxation. Reports upon the economic importance of specific industries will be a feature of the course. Text, lecture, reports, collateral reading. Three hours, second term.

12. **General Forestry.** Elementary forest field work in dendrology, mensuration, logging, camping and packing. Training in the work of a Forest Service guard. Text, lecture, field work. Freshman, summer camp, two months.

13. **Dendropathology.** Systematic study of the important tree diseases; means of identification; methods of control. Text, lecture, collateral reading. Two laboratory periods, second term.

14. **Commercial Law.** Contracts, agency, appropriation of water for power and irrigation, affidavits, bonds, commercial paper. The work will be considered from the standpoint of the Forest Service. Text, lecture, collateral reading. Three hours, third term.

15. **Wood Technology.** Structure of wood tissue; classification of fibers; identification of woods, generic and specific. Both microscopic and macroscopic identification will be considered. Each student is required to make a series of microscopic slides for use in the course. Text, lecture, reports, collateral reading. Three laboratory periods. Four hours, third term.

16. **Field Work.** Field work in forest surveying, mensuration, silviculture, forest soils, logging engineering, tree diseases. This work will be under the supervision of the head of department concerned. Lecture and field work. Sophomore, summer camp, two months.

17. **Seminar.** Systematic review, special investigative studies, research. To be considered in connection with forest "18." Thesis. Three hours, entire year.

18. **Thesis.** The subject of the thesis is selected in consultation with the head of the School and may be along lines of original research or simply investigative. For students desiring to enter private work it will be along the line of their specialization. The thesis must come up to certain specifications and will be filed in the Forest School library.

MASTER OF SCIENCE IN AGRICULTURE

A graduate course in agriculture is offered leading to the degree of Master of Science in Agriculture. A reputable baccalaureate degree is a prerequisite. The major and at least one minor must be elected from courses offered in the College of Agriculture. One minor may be chosen from graduate courses offered in other departments of the University. The choice of courses is subject to the approval of the professor in charge of the department in which the major course is selected.

Graduate work is offered in five courses by the College of Agriculture, in Agronomy, Agricultural Chemistry, Horticulture, Animal Husbandry, Veterinary Medicine.

In Agronomy stress is laid upon soil types of Georgia, improvement of seed corn, physical properties of soils, fertilizers.

In Agricultural Chemistry, special attention is given to agricultural chemical analysis, with select readings and laboratory work.

Graduate work in Horticulture will be given in advanced pomology, with select readings upon plant breeding, origin or species, etc.

Animal Husbandry Graduate work will take up feeding tests with study of chemical and physiological changes in animal life.

Graduate work in Veterinary Science consists of theory and practice of veterinary medicine, clinics, lectures and laboratory work in bacteriology.

For full particulars about graduate work, the candidate should write to the University of Georgia for special bulletin announcing the Graduate School.

MATHEMATICS.

C. M. SNELLING, Professor.
R. P. STEPHENS, Associate Professor.
R. S. POND, Adjunct Professor.
H. W. SMITH, Assistant.

1. **Trigonometry.** A course in plane and spherical Trigonometry. Three hours per week for the first two terms. Texts: Murray's. *Professors Snelling, Stephens* and *Pond.*

2. **Graphical Algebra.** This will include a study of coördinates, the plotting of curves, and the derivation of the equations of the straight line and the circle. Three hours per week for the third term. *Professors Snelling, Stephens* and *Pond.*

3. **Analysis.** The work of course "2" will be continued by the study of the equations of the conics and by an introduction to the Calculus. Three hours per week for the first half year. Text: Smith and Granville's. *Professors Stephens* and *Pond.*

4. **Advanced Algebra.** The following topics will be treated:

mathematical induction, binomial theorem, complex numbers, determinants, theory of equations, partial fractions, series, and logarithms. Three hours per week for the second half year. *Professors Stephens* and *Pond.*

CIVIL ENGINEERING.

C. M. STRAHAN, Professor.
E. L. GRIGGS, Associate Professor.
S. B. SLACK, Adjunct Professor.
(F. O. Miller and H. E. Newton, Student Assistants.)

A-1. **Elementary Surveying.** A course covering the use, care, and adjustment of surveying instruments, methods of surveying by chain alone, by compass, and by transit; the methods of platting and computing areas and volumes; the variation of the magnetic needle; problems in parting off and dividing lands; the use of the Y level and precise leveling; plane table and stadia surveying, and the use of the solar transit. Three hours per week. Texts, Breed and Hosmer's "Surveying." *Professor Griggs.*

B-1. **Materials of Construction.** A course of lectures and laboratory work covering the occurrence, preparation, and manufacture of the important structural materials, to-wit: lumber, its seasoning, inspection and preservative treatment; stone, natural and artificial, including brick, terra cotta, cements, concrete blocks, etc.; the metals, including cast iron, wrought iron, steel, copper, tin, lead, zinc, aluminum and alloys as used by engineers; uniting materials, covering limes, mortars, cements, bituminous binders, joinery, riveting, etc. First and second terms. The third terms is given to Foundations and Masonry structures, the course being based on Baker's Masonry Construction. Three hours per week. *Professor Strahan.*

B-2. **Railroad Engineering.** A course covering reconnoissance, preliminary and location surveys, curves, spirals, switches, etc., cross-sectioning, computations and estimates, railroad economics and the various other problems involved in the complete engineering of railways. Three hours per week. Text: Allen's "Railroad Curves and Earthwork." Lectures. *Professor Strahan.*

B-3. **Highway Engineering.** A course of lectures, laboratory and field problems covering the surveys, location, drainage, grading and surfacing of public highways and city streets. The preparation of maps, profiles and estimates. Paving methods and specifications. Road finances, equipment and labor. Three hours per week. *Professor Slack.*

PHYSICS.

L. L. HENDREN, Professor.
C. R. FOUNTAIN, Adjunct Professor.
E. A. BAILEY, Tutor.

The following courses are offered for agricultural students. For other courses see the A. and M. College announcements.

2. **Elementary Physics.** A college course covering the elementary principles. In this course especial emphasis is laid upon the application of the principles of Physics to practical life. Three hours per week recitation work and two hours per week laboratory work throughout the year. Required of all Sophomore B. S. agricultural students and Freshman B. S. forestry students.

3. **Physical Measurements.** This course is offered as an extra course for students taking Physics "2" who desire to do more individual laboratory work than is required in the regular course. Two hours per week in the laboratory.

CHEMISTRY.

H. C. WHITE, Professor.
H. V. BLACK, Associate Professor.
W. F. CLARKE, Instructor.

The following courses are offered:

1. **Elementary Chemistry.** Three hours per week of lectures and recitations and two laboratory periods, for three terms. Text: McPherson and Henderson, "Elementary Chemistry."

2. **Inorganic Chemistry; College Course.** Three hours per week of lectures and recitations and two laboratory periods, for three terms. Text: Noyes' "Text Book of Chemistry."

BIOLOGY.

JOHN P. CAMPBELL, Professor.
C. D. WARD, Student Assistant.

In this school, the following courses are offered for the coming year:

3. **Invertebrate Zoölogy.** This course is based upon the laboratory study of a series of selected types representing all of the leading invertebrate phyla of the animal kingdom. Anthropods are studied in the first term; Protozoa, Porifera, Coelentrates and some of the smaller phyla in the second; while Annulata, Echinoderms and Mollusca take up a third. This course is intended to give students a broad outlook on the animal kingdom as a whole, and to this end many theoretical questions are taken up in connection with those animals which best serve to illustrate them. Three hours weekly with laboratory work additional.

4. **Vertebrate Zoölogy.** The methods in this course are the same as in course "3." The different classes of vertebrates are studied by means of selected types, but this is supplemented by extended reading, museum work, and lectures profusely illustrated with lantern slides. Two hours weekly with two additional laboratory periods during first and second terms.

5. **Comparative Osteology.** The comparative structure of the skeletons in the different vertebrate classes is taken up in this course. Special stress is laid upon the broader features of theoretical importance, but sufficient detail will be brought out to make this course valuable to any one who may have occasion to make actual use of its subject matter. Two hours weekly with two additional laboratory periods during third term.

6. **Comparative Anatomy of Vertebrates.** In this course, attention is paid to the broader side of Anatomy, including Embryology and Histology. All the organs in the body are studied comparatively and attention is given to the theoretical questions growing out of this line of study. Based on Kingsley's "Comparative Anatomy of Vertebrates." Three hours weekly with extra laboratory work.

BOTANY.

J. M. READE, Professor.
H. N. HARVEY, Assistant.
F. C. WARD, Assistant.

A. **Plant Life.** This is a brief course arranged for one-year students and is open to them only. It is designed to be introductory to practical work in horticulture and agronomy.

1. **Elementary Botany.** This is the first regular course open to matriculates. It is required of all four-year students. In character it is introductory to the general subject, dealing with a range of topics but not omitting what is fundamental in the structure and biological relations of familiar plants. Two lectures and two laboratory periods per week through the year.

Other courses in Bacteria, Fungi, Physiology, Ecology, Genetics, and Plant Diseases, open to students in agriculture, are described elsewhere in the general catalog.

RHETORIC AND ENGLISH LITERATURE.

R. E. PARK, Professor.
S. V. SANFORD, Junior Professor.
S. M. SALYER, Instructor.

1. **Composition and Rhetoric.** Detailed study and practice in construction and kind of composition. This course will involve continual practice in writing and some work in rhetoric analysis.

Lectures, themes, daily exercises. Required of Freshmen. Three hours a week. *Professor Sanford* and *Mr. Salyer.*

2. **English and American Literature.** The principles of literary criticism and the practical applications of these principles to masterpieces of authors studied with reference to (1) elements of literature, (2) species of literature, (3) historical development. The object of this course will be to give to the student a general view of the history and development of literature, with more detailed knowledge of certain periods. Throughout the course much attention will be devoted to the writing of essays as a means of training the student to appreciate and to express his appreciation of the literature studied. Required of Sophomores. Three hours a week. *Professor Park* and *Mr. Salyer.*

ROMANCE LANGUAGES.

J. LUSTRAT, Professor.
W. T. TURK, Instructor.

1. **French 1** is a course for beginners who are conditioned in French and wish to substitute both French and German for Greek, and also for agricultural and engineering students who do not offer language for entrance conditions.

The course consists of careful drill in pronunciation, the rudiments of grammar, the study of regular and irregular verbs, the inflection and use of personal pronouns, the rudiments of syntax, dictation, easy exercises of translation from English into French, conversation and the reading of about 275 duodecimo pages of easy prose. Three hours per week.

2. **French 2** is the continuation of course "1." It will comprise the reading of about 400 pages of easy modern prose, constant practice in translation into French of easy English prose, dictation, short drill in grammar and syntax, full study of all irregular verbs, and conversation. Three hours per week.

GERMAN.

JOHN MORRIS, Professor.
M. D. DuBOSE, Adjunct Professor.

1. **German 1** is a course for beginners who are conditioned in German and wish to substitute both German and French for Greek in the A. B. degree. This course comprises grammar and reader, with daily oral and written exercises. Three hours per week. *Professor Morris* and *Adjunct Professor DuBose.*

2. **German 2** continues the work of German 1, and completes the requirement for entrance. The course consists of grammar, translation of simple texts, and exercises in both speaking and writing German. Three hours per week. *Professor Morris* and *Adjunct Professor DuBose.*

HISTORY AND POLITICAL SCIENCE.

J. H. T. McPHERSON, Professor.
W. O. PAYNE, Associate Professor.
R. P. BROOKS, Associate Professor.

2*a*. **Economic History of the United States.** This course will trace the development of American agriculture and industry from colonial times to the present. Emphasis will be put upon topics of special interest to the South. Three hours per week, second half year. Required of Freshmen in the School of Commerce, and optional in conjunction with Economics "1," for Sophomores in the Agricultural College. *Professor Brooks.*

4*a*. **Economic History of England.** A survey of English History with special emphasis upon the development of agricultural, commercial, and industrial life and conditions. This course will be extended to include a similar study of continental Europe during the eighteenth and nineteenth centuries. Three hours a week throughout the year. Optional for Sophomores in Bachelor of Science in Agriculture; required of Sophomores in Bachelor of Science in Commerce. *Associate Professor Payne.*

ECONOMICS.

WM. A. SHELTON, Associate Professor.

1. **Economic Geography.** First half year. Open to Freshmen and Sophomores. A comparative study is made of the present status of industry, commerce, and industrial training of the principal countries of the world. The chief products and industries, the commercial and industrial centers, the distribution of population, the use and conservation of natural resources, and international trade are some of the topics considered.

3 (or 5). **Principles of Economics.** Open to Sophomores. *Associate Professor Shelton.*

(a) First Semester. An introductory course in the laws of consumption, value, price, production, and distribution. The principles are applied to business organization and the economic problems of the day, such as money and banking, the tariff, monopoly, the regulation of railways and industrial corporations, government revenues and expenditures, taxation, the labor movement, socialism, and economic progress.

(b) Second Semester. A more careful study of wealth and capital, the general level of prices, supply and demand in relation to price, the rate of interest, income from capital and labor, and wealth as related to welfare.

DEPARTMENT OF EDUCATION.

T. J. WOOFTER, Dean.
J. S. STEWART, Professor.
L. R. GEISSLER, Associate Professor.
H. W. ODUM, Associate Professor.
R. W. WESLEY, Student Assistant.

Note. The following courses of the Peabody School of Education are offered in the College of Agriculture as general electives:

Psychology.

1. **Elementary Psychology.** An introductory course covering the essentials of general Psychology. Three hours a week, first and second term. *Professor Geissler.*

2. **Educational Psychology.** A study of mental development. Three hours a week, last term. *Professor Geissler.*

3. **Psychology of Business Procedure.** A brief review of social psychology and an application of psychological principles and mental tests to problems of advertising, salesmanship, administration, general efficiency, and vocational selection and guidance of employees. First term, three hours a week. Prerequisite, Psychology "1" or "5." *Professor Geissler.*

4*a*. **Psychology of Exceptional Mental States.** A study of psychological problems involved in law, morality, art, every-day life, illusions, hypnosis, dreams, etc. Second term, three hours a week. Prerequisite, Psychology "1" or "5." *Professor Geissler.*

4*b*. **Psychology of Mental Deficiencies.** A brief survey of the facts of feeble-mindedness, idiocy, inherited and acquired mental diseases, etc. Third term, three hours a week. Prerequisite, Psychology "1" or "5." *Professor Geissler.*

5. **Principles of Psychology.** A systematic study of the adult normal mind. Three hours a week throughout the year with a two-hour period of laboratory work. May be taken as a beginning course but not along with Psychology "1," and may be counted as a science in group "2." *Professor Geissler.*

6. **Experimental Psychology.** An advanced course of laboratory work and conferences, the equivalent of a four-hour credit throughout the year. Prerequisites, Psychology "1," or "5." May be counted as a science in group "2," provided that Psychology "5" has not been counted as a science. *Professor Geissler.*

7. **Systematic Psychology.** A Graduate course. See Graduate School.

11. **Applied Psychology.** A Graduate course. See Graduate School.

Philosophy.

3. **Logic.** A study of both deductive and inductive logic. Three hours a week first term. *Professor Woofter.*

4. **Ethics.** A study of human conduct. Three hours a week second and third terms. *Professor Woofter.*

8. **History of Philosophy.** A study of the movements of thought and of great thinkers of the world. Three hours a week, first term. Senior or Graduate course. *Professor Odum.*

9. **Social Philosophy.** A study of inductive sociology and social philosophy. Three hours a week, second and third terms. *Professor Odum.*

26. **Recent Philosophy.** Not given 1915-16. *Professor Woofter.*

Education.

1. **History and Principles of Education.**

a. History of education. Three hours, first half year.

b. Social principles of education. Three hours, second half year. *Professor Odum.*

2. **Educational Phychology.** A study of mental development. Three hours a week, second half year. *Professor Geissler.*

4. **Secondary Education.** A study of the American high school and a comparison with secondary schools in leading foreign countries. Three hours a week throughout the year. *Professor Stewart.*

5. **Elementary Sociology.**

a. Elementary Sociology. Three hours a week, first term.

b. Rural Sociology. Three hours a week, second term. *Professor Odum.*

6. **Vocational Education.** Special attention to agricultural education. Three hours a week, third term. *Professor Odum.*

9. **General Sociology.** A study of inductive sociology and social philosophy. Three hours a week, second and third terms. *Professor Odum.*

10. **Philosophy of Education.** The approach will be through the theory of human evolution with its implications for educational theory. Three hours a week, first half year. Junior or Senior credit. *Professor Woofter.*

12. **Administration of Education in a Democracy.** The development of popular education and of organized systems of public instruction. Three hours a week, second half year. Junior or Senior credit. *Professor Woofter.*

17. **Educational Sociology.** A Graduate course. See Graduate School.

18. **Problems of Rural Life and Education.** A Graduate course. See Graduate School.

19. **Standards of Economy and Efficiency of Negro Education in Clarke County.** (Phelps-Stokes Fellowship Study). A graduate course. See Graduate School. *Professors Brooks* and *Odum.*

20. **Physical Education.** Two hours a week in class and two hours a week in gymnasium. Three hours credit. *Mr. Peacock.*

22. **Manual Training.** Woodwork, forge work, drawing, and other manual activities. Taken in Agricultural College, Farm Mechanics "1," "2," etc. Three hours credit. *Professor Hart.*

24. **Education in the United States.** This course will in the main be treated historically. Lectures and conferences. A Graduate course. See Graduate School. *Professor Woofter.*

14. **The Principles of Teaching and School Management.** Will be offered later.

16. **The Teaching of Special High School Subjects.** Will be offered later by members of general faculty.

25. **Education in Foreign Countries.** Will be offered later. *Professor Woofter.*

GEOLOGY.

Vacant.*

1. **General Geology.** Three hours per week, second half-year. The course of instruction is at first a general one, embracing the study of the distinguishing properties of minerals and common rocks, the decay of rocks and the formation of soils. Following this is a more extended course of Structural, Dynamical and Historical Geology.

MILITARY SCIENCE AND TACTICS.

W. R. KENDRICK,

17th U. S. Infantry, Commandant of Cadets.

In accordance with the provisions of the Land Grant Act, military exercises are regularly held in this College. Attendance is compulsory for members of the Freshman, Sophomore and Junior classes, and the students in the one-year course in Agriculture, except when excused by the surgeon of the Corps of Cadets.

The uniform consists of a coat of standard Charlottesville gray cloth; winter trousers of same material, with stripe one inch wide; and blue cap. The uniform costs about $15.55. For spring use white duck trousers, khaki trousers and blue shirt, leggins and hat are required, costing about $5.50.

Practical instruction is given three hours each week, covering the following subjects: Infantry Drill Regulations; Field Service Regulations; Manual of Guard Duty; Firing Regulations for Small Arms; Artillery Drill Regulations, partial.

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*Temporarily in charge of the professor of Chemistry.

Theoretical instruction, two hours each week, for commissioned and non-commissioned officers, is given in portions of the above subjects covered by the practical instruction, and is supplemented by lectures. One hour each week of theoretical instruction is required of Freshmen.

ONE YEAR COURSE

This course commences at the opening of the fall session and continues throughout the collegiate year. The purpose of this course is to provide suitable instruction for those who can only remain in college for one year. An effort has been made, therefore, to condense the work as much as possible, provide a correct scientific foundation and yet make the instruction of a very practical nature. An outline of the one-year course follows. The schedule indicates the number of hours required in each subject and the amount of time devoted to class-room and laboratory work. Notice that the laboratory instruction has been emphasized as this is considered the best way of demonstrating the value of applied science to the solution of the problems of the farmer. Students entering this course who are capable of carrying the Freshman Mathematics for English may be permitted to do so upon the approval of the President of the College.

ONE-YEAR COURSE.

First Term.	Hours.	Lab. Periods.
English	3	--
Arithmetic	3	--
Cereals	2	--
Cereal Judging	--	1
Soils	3	--
Iron and Wood Work	--	3
Horticulture	3	1
Breeds and Breeding	3	2
Botany	3	--
Veterinary Medicine	3	--
	23	7
Second Term.		
English	3	--
Arithmetic	3	--
Cotton and Cotton Grading	3	1
Soil Fertility	3	--
Farm Machinery	--	1
Horticulture	3	1

Dairying	1	2
Feeds and Feeding	3	1
Farm Management	2	--
Veterinary Medicine	2	1
	23	7

Third Term.

English	3	--
Farm Accounts	3	--
Grass and Forage crops	3	1
Chemistry	3	--
Plumbing and Pipe Fitting	--	1
Horticulture	3	1
Farm Buildings	--	1
Practice Work Animal Husbandry	--	1
Surveying	3	1
Forestry	2	1
Veterinary Medicine	2	--
	22	7

AGRONOMY. (One-year course).

Cereals and Cereal Judging. The history, use and cultivation of the different cereals is studied. Especial attention is given to seed selection as influencing the yield of farm crops. A study of the various cereals, especially corn, is made by use of the score card. First term. Two 1-hour recitations and one laboratory period.

Farm Management. An examination of the various business methods employed on different classes of farms is first undertaken. Special attention is given to systematizing the work and determining the effect of various rotations on the maintenance of fertility. A stereopticon is used to show how various kinds of farms should be arranged so as to conduct the business with the greatest economy. Second term.

Grass and Forage Crops. A study is made of the various grasses adapted to this state that can be utilized to the best advantage for pasture and hay. The uses of the forage crops, especially the legumes, are given considerable attention. Methods of growing and preserving silage are considered at length, as this is undoubtedly the best form for preserving forage crops in the South. Third term.

Soils. A study of the physical properties of soil is made, and the effect of good and poor mechanical conditions on crop production is demonstrated. Methods of improving the physical conditions are studied. Special attention is given to the water-holding capacity of the soil, and the best methods of conserving soil mosture. First term. Three 1-hour recitations.

Soil Fertility. The different fertilizing ingredients and their function in plant growth will be discussed. Methods of mixing fertilizers and determining the formulas best adapted to different soils are studied. The effect of rotation of crops on soil fertility and the draft of the different crops on the soils also receive attention. Second term. Three 1-hour recitatione.

COTTON INDUSTRY. (One-year course).

Emphasis is laid on the importance of seed selection. A study of types of plants with special reference to their yielding capacity is made, and the conditions affecting length, strength, uniformity, quality and quantity of fiber. Some attention of seeds given to combing and grading cotton, and all varieties are studied in the laboratory. There is a complete set of grades of long staple and upland lint cotton in the laboratory for inspection and comparison, and students are required to grade by the samples, after the basis of grading has been pointed out. Second term. Three 1-hour recitations. One laboratory period.

ANIMAL HUSBANDRY. (One-year course).

Breeds and Breeding. A practical course will be given in the study of domesticated animals, and a consideration of the fundamental laws underlying their production. Three 1-hour recitations.

Dairying. In this course lectures will be given on the principles of modern dairying and on the manufacture of butter, cheese and other products. Practice work in the operation and repair of dairy machines will be required of all students. The use of the Babcock test and other apparatus for the detection of adulteration of milk will be fully explained. Two lectures and two laboratory periods. Second term.

Feeds and Feeding. In this course a study of the various feeding stuffs will be taken up. The balancing of rations and their adaptation for maintenance, development of bone and muscle, production of milk and butter, and for maintaining and fattening farm animals will be discussed and explained. Three 1-hour recitations and one laboratory period. Third term.

Stock Judging. Scoring, judging and classifying the various classes of farm live stock will be an important part of this course. After the student has become proficient in the use of the score card, work will be given in comparative judging and show-ring placing. The standard of excellence as established by the several breeders' associations will also be given some attention. First term. Two laboratory periods.

HORTICULTURE. (One-year Course).

Orchards. A study of orchards as to location, site, exposure, cul-

tivation, fertilization, planting, pruning, spraying, thinning, harvesting and marketing. Book to be used, "Principles of Fruit Growing," by L. H. Bailey.. Three 1-hour lectures and one laboratory period per week. First term.

Propagation and Pruning. A study of budding, grafting, and other methods of plant manipulation and propagation, with a course in the principles and practice of pruning. Three lectures and one laboratory period per week. Second term.

Small Fruit and Trucking. A course in the management of small fruit plantations and truck gardens, following much the same order as the orchard course. Particular attention will be given to the construction and management of hot beds as well as to the principal small fruit and vegetable crops of the section. Book: "Productive Vegetable Growing," by J. W. Lloyd. Three lectures and one laboratory period per week. Third term.

FARM MECHANICS. (One-year course).

Wood Work. This will include the care and use of wood working tools. It will be made as practical as possible. The majority of the exercises will consist of the construction of articles that will be needed on the farm, such as gates, fences, wagon beds and other farm conveniences. First term. Two laboratory periods.

Forge Work. This course will include welding and shaping of iron and handling of steel. Considerable attention will be paid to the making and tempering of small hand tools. A student after taking this course should be able to do all of the ordinary repairs of farm machines and other blacksmithing that will be necessary in farm work. First term. Two laboratory periods per week.

Farm Machinery Judging. A study of the principles of construction and operation will be made. Considerable time will be given to studying the individual parts of the different farm machines. Considerable time will be devoted to motors, especially gasoline and steam engines. Third term. Two laboratory periods.

Farm Buildings and Fences. The strength and adaptability of the materials available for construction will first be determined. Principles of construction will be studied, and considerable time will be given to planning the different farm buildings with especial regard to convenience and sanitation. The use of concrete on the farm and principles of concrete construction will be demonstrated. Laboratory practice will constitute an important part of the work.

Farm Engineering. Instruction will be given in the use of the instruments necessary in surveying farm lands and terracing. Some time will be given to the location of roads, terracing and leveling.

Plumbing and Pipe Fitting. A short course in plumbing and pipe fitting will be given in connection with farm building. It will

consist of the location and planning of the water supply and drainage away from the home, and the proper laying out of a perfectly sanitary system of plumbing for buildings. The proper assembling and selection of the material needed for a complete job, and the calking of joints, will be studied.

VETERINARY SCIENCE. (One-year course).

1. Consists of lectures in the anatomy and physiology of the horse, with brief notices of the variations occurring in the other farm animals. Lectures on Materia Medica cover the more commonly used drugs and medicines, paying particular attention to the action and dosage of the drugs. First term. Three hours per week.

2. Consists of lectures on Theory and Practice and Surgery; deals with the most common diseases of the horse and cow, the minor operations that are performed on these animals, and the care of surgical and accidental wounds. Second term. Two hours per week.

3. Consists of free clinics held at the Veterinary Hospital. One hour per week. Second and third terms.

4. Consists of lectures on Obstetrics and Dentistry. Two hours per week. Third term.

AGRICULTURAL CHEMISTRY. (One-year course).

This course is planned to prepare the student for intelligent study of the chemistry of soils, fertilizer and foods. At first the elements and compounds most important to agriculture will be taken up. The composition of farm crops, and the application of chemistry to plant and animal life will be studied. Text, "Agricultural Chemistry," by Hart and Tottingham. This course consists of three lectures during third term.

FORESTRY. (One-year course).

A study of forestry as applied to farm woodlands. How to secure a stand of timber, how to thin, to protect, and harvest the forest crop. Second half-year. Two 1-hour lectures and one 1-hour practice period.

THREE-MONTHS OR WINTER COURSE IN AGRICULTURE.

Short courses of instruction in agriculture and related subjects are offered for the benefit of those who are engaged or expect to engage in farming, and yet who are so situated that they cannot undertake a full college course of study. This course is given during the winter when work is least pressing and the time can best be spared. The course consists principally of the regular work provided during the winter term of the one-year course, with such additional elective subjects as the student finds he can conveniently carry after consulting the president of the College.

Those desiring to take this course can familiarize themselves with the nature and character of the work by referring to the schedule of the one-year course for the second term. Considerable extra work may be taken if desired. Certain subjects may also be dropped and others elected to meet the wishes of the student. Those intending to take this course of instruction are urged to write to the College authorities some time in advance so that suitable arrangements can be made for them.

SHORT COURSE FOR FARMERS

In Cereal Production, Cotton Industries, Live Stock Farming, Horticulture. This course is of ten days duration, beginning Tuesday, January 4, and ending Friday, January 15, 1915. It is open to all farmers, is free except for a registration fee of $1.00, and no examination is required.

The object of this course is to present essential facts in a practical form, with plain language, and make them easy of application to every-day work on the farm.

The lectures offered in the several short courses are summarized and presented to the student on mimeographed paper. When the course is over each pupil will have fifty lecture sheets, comprising a ready reference book on the subjects which he has studied.

This course is offered in midwinter at the beginning of a year as the most suitable time for getting away from the farm and as the logical time to plan the year's program for the farm under the guidance of experts at the College.

Rapid changes in agricultural activities are necessitated by the coming of the boll weevil. The active farmer who can not cease work long enough to take a college course, will find the short course a great assistance in helping him into other lines of farming than he is accustomed to.

No other way is open to the farmer for getting so quickly, and at such low cost the information that the agricultural emergencies of Georgia require, than that presented by the Short Course of the College of Agriculture.

AGRONOMY. (Short Course).

Five Lectures on Cereal Production and Improvement. Production of cereals at least for home consumption is of importance. This is emphasized this year on account of cotton depression. Methods of soil preparation, fertilization and means of seeding adapted to Georgia conditions will be given especial attention. The improvement of the crops by means of seed selection will have to be the basis of increased production in this state. Records from the demonstration field for a number of years will be used to illustrate

what can be done with the various cereals and the influences of different methods of culture. *Professor Childs.*

Ten Lectures on Legumes. The advantages of legumes are pretty thoroughly understood at this time, and there seems to be a good deal of interest in requirements of special crops, such as alfalfa, bur clover, vetch, true clovers, and others. These different crops will be discussed in regard to their history, soil requirements, fertilization, inoculation, seeding, time of cutting and curing. More time will be devoted to alfalfa than to the others. Bur clover and other winter growing legumes will receive special attention. *Professor Fain.*

Five Lectures on Insects Injurious to Grain. In Georgia a great deal of damage is done the cereal crops by various insects, both in the field and after storage. A study of the life history of the more injurious insects will be made with suggestions as to methods of control. *Professor McHatton.*

Ten Lectures on Farm Management. Factors that enter into successful farming as shown by the recent surveys will be discussed.

The different lines of farming and combination of these different lines will be given special attention.

The equipment and organization of the farm for special combinations will be considered.

Successful coöperative organizations of this country for marketing farm products will be studied. *Professor Fain.*

Five Demonstrations in Cereal Judging. Cereal judging will include a study of varieties by use of the score card, by actual measurement and scale, and by germination tests. This course will be especially helpful to those who are seeking new varieties for their farm. *Professor Childs.*

Five Periods in Demonstration of Legumes. Study will be made of the seeds of the various legumes and the best method of harvesting and handling. An examination of nodules will be made on the different plants showing how they develop under different conditions. Different methods of inoculation will be demonstrated. Methods of handling crops, such as time of cutting and curing will be given special attention. *Professor Starr.*

Ten Lectures on Fertilizers. A careful study will be made of the effect of various mineral elements in the soil on plant growth; the best means of supplying those in which the soil is most likely to be deficient; the sources of nitrogen, phosphoric acid and potash, and methods of purchasing, mixing and applying these various constituents to the soil for the purpose of producing maximum crops. Liming soils, crop rotations and their relation to maintaining the plant food supply will be discussed. *President Soule.*

Ten Lectures on Soils. The general soil types of Georgia will

be studied from the standpoint of origin, physical and chemical properties, present condition and needs. A special study will be made of the moisture content, its movement and control. Attention will be given to the value, and sources of organic matter, especially of green and stable manure. The value and sources of lime will be emphasized as well as methods of cultivation for the improvement of soils. *Professor Crabb.*

Five Lectures on Farm Machinery. Owing to the scarcity and high price of labor, every means which will reduce the cost of production must now be employed by the cotton planter. Therefore, the different forms of plows, cultivators and seeders which may be utilized so as to economize labor and increase the efficiency of soil cultivation will be considered, and as far as possible, the various implements discussed will be exhibited before the class in the farm machinery laboratory. *Professor Hart.*

LIVE STOCK. (Short Course).

The College farm comprising 730 acres, affords many useful lessons in live stock, since it is operated and managed on the basis of a stock farm. Herds of pure-bred Jerseys and Holsteins and grade dairy cattle are maintained.

Percheron horses are used as the foundation in horse breeding, while hog production is represented by the Tamworth and Berkshire breeds. More than 150 head of live stock are kept on the farm, thus providing ample facilities for students to learn the characteristics of the different breeds, and the best methods of feeding and handling the same for economic results. Herefords and shorthorns are grown for beef.

The department of veterinary science has a laboratory building where the diseases of live stock are studied and clinic work is carried on.

Ten Lectures on Feeds and Feeding. This course reviews the courses of feeding stuffs available for the maintenance of live stock, special emphasis being laid on the value of cotton seed and its by-products, and all other materials produced in the state which can be utilized to good advantage in animal nutrition.

Ten Lectures on Breeds and Breeding. In this course the origin, history and development of the various breeds of horses, cattle, sheep and swine adapted to Georgia are considered.

Ten Lectures on Diseases of Farm Animals. This course includes a review of the methods used to control and eradicate contagious diseases of live stock, including United States quarantine regulations concerning the transportation of animals affected with contagious diseases and disease-producing parasites; a consideration of some of

the more common diseases and ailments of farm animals, together with means of prevention and methods of treatment.

Five Clinics are held to demonstrate the methods of administering hog cholera serum and other biological products, how to examine horses for soundness, together with a consideration of the seriousness of various blemishes and unsoundness from an economic standpoint.

Five Demonstrations in Stock Judging. For the student electing the live stock course, practical work is given in the afternoons in scoring farm animals, as well as actual work in show-ring placing. Students taking the course in live stock farming also elect fertilizers and soils.

Five Periods in Stock Judging. The score card is used to familiarize the students with the important points of the different classes of live stock. With the records of production of the dairy herds, the correlation between form and function can be clearly demonstrated. The stock judging work includes horses, hogs, dairy and beef cattle.

Five Periods on Preparing Show Cattle. This course deals with forming, fitting and decorating for show; the making of holders and the ordinary methods of confining animals.

HORTICULTURE. (Short Course).

Many persons are intensely interested in securing more definite knowledge concerning orchard management. This is especially true since the wonderful possibilities of apple production in north Georgia have become more generally appreciated. To meet this public demand a specialized course in horticulture has been provided.

Five Lectures on Trucking. In this course will be given a discussion of the soils, cultivation, fertilization, havesting, marketing and other truck problems.

Ten Lectures on Orchard Management. These will include discussions of site, location, choice of plants, planting, tillage, cover crops, fertilization, pruning, thinning, frost, spraying, picking, packing and selling.

Five Lectures on Diseases of Fruits. Brown Rot, Apple Scab, Pear Blight, and other diseases incident to the culture of the tree fruits in Georgia will be considered.

Five Lectures on Insects of Fruits. The Codling Moth, Plum Curculio, Peach Borer and other insects incident to the culture of tree fruits in this state will be discussed.

Ten Demonstrations in Spraying and Pruning, consisting of practice in mixing and applying sprays, fighting frost, pruning trees, etc.

Students taking the course in horticulture will also elect fertilizers, soils and farm machinery.

BOYS' AND GIRLS' SHORT COURSES

To meet the requirements of the boys and girls who have won short course sholarships in corn, canning, pig and poultry club work, special courses have been arranged. The instruction is elementary, practical and visualized as far as possible by application or illustration.

An announcement of the courses is as follows:

FOR CORN AND PIG CLUB BOYS.

Soils and Fertilizers. Five lectures. A careful study of Nitrogen, Phosphoric Acid, and Potash, the sources from which we can get these and their function in plant development. A careful study of formulas—what they mean, etc., will be given. Home mixing of fertilizer will be stressed and the boy will be shown how to do this work accurately. A detailed study will be given of the most general types of soil found in Georgia, to what crops they are best adapted, and how best to handle them to get maximum yields.

Rotation of Crops. Five lectures. A simple study of the best methods of crop rotation and the effects on increased production. Special stress will be laid on winter cover crops and on all forms of useful legumes.

Seed Selection. Five lectures. How the boys may improve the producing power of plants by selecting seed from the field. How to grow improved varieties of seed and how to care for same. Cereal judging will be stressed and the boys will be required to do considerable amount of this work in the laboratory.

Live Stock. Five periods. The boys will be required to study closely the work being done at the College in regard to dairying, beef production, hog raising, and horse breeding. Inspection of each of these will be made by the boys with the professor in charge, and they will be required to judge according to score card after being given the lecture.

Farm Machinery. A careful study of all forms of improved farm machinery will be provided and the boys will be required to handle same.

Farm Poultry. The poultry course for boys is designed to give them practical knowledge of chicken raising on the farm. Incubation, care of chicks, feeding, housing and marketing will be among the subject discussed. Two hours each day will be given to this work and the course will be made as practical as possible. The boys who complete this course should be able to handle and care for a good sized flock of chickens. Laboratory work will consist of inspection trips to model poultry farms, operation of incubators, killing and dressing poultry for market.

Field Observation. The boys will be taken in charge and shown the farm buildings, farm equipment and work being done on the college farm. Special stress will be laid on the test plat and the alfalfa fields.

Daily Record and Booklets. The boys will be required to write an attractive story of how they grew their acres of corn in 1915. These will be put out in booklet form. An outline for the story and helpful suggestions will be given.

Anatomy and Physiology. A series of five lectures, given in simple language, including studies of the blood, circulation, foods, digestion, and suggestions for the care and handling of farm animals.

Home Gardening. Five lectures. This course of lectures will take up the fundamental principles of gardening, discussing soils, fertilization, handling of plants, varieties and cultural methods particularly adpated to the home garden.

Home Orchard. Five lectures. This course will consist of a general discussion of fruits and varieties, soils and fertilizers as well as cultural methods required. Special attention will be given to the home fruit acre.

FOR CANNING AND POULTRY CLUB GIRLS.

Practical Farm Poultry. The poultry course for girls is designed to give them a practical knowledge of chicken raising on the farm. Two hours each day will be spent in this work. A series of short lectures will be given which cover the most important points in feeding, incubating and brooding, housing, caring for and marketing the eggs, killing and dressing fowls and in preventing disease in the flock. Following the lecture the girls will take laboratory work or will be taken out into the poultry yards where they will be given a chance to become familiar with the different varieties of chickens common in Georgia, and learn the methods of poultry raising practiced at the College poultry yards. The girls will be expected to set up and start an incubator and brooder, assist in killing and dressing fowls for cooking, make lice powder, test eggs and do other practical work.

After completing this course a girl should be able to take up poultry work at home with increased interest, and make it pay.

Home Vegetable Gardening. This course is designated to teach the fundamental principles of vegetable gardening by going into a discussion of the following: varieties, plant propagation, soil fertilizing, soil preparation, transplanting of certain varieties, summer and winter cultural methods, the use of garden implements, fighting insects and preventing disease.

Ten lectures are given in this course. One entire lecture is devoted to the tomato, since this vegetable has aroused a great deal

of interest with the advent of the girls' canning clubs. The remaining lectures are upon groups of vegetables, and are so given as to teach principles rather than routine of gardening.

Cooking and Food Study. Ten two-hour periods are devoted to cooking, the work being planned with the two-fold object of teaching some fundamental principles of cookery and giving the student skill in the preparation of wholesome dishes. The lessons will include cooking green vegetables, starchy vegetables, making cream soups, making muffins, biscuit, light-bread, sandwiches and coffee; cooking cereals and meat stew in a fireless cooker, and preparing the chickens dressed in the poultry class for table. A number of periods will be given to the study of foods. The classes of food and their function in nutrition will be taught by experiments, use of charts and lecture. The selection of foods for a healthful diet will be considered in brief but practical way.

Rural Home Conveniences. A practical course illustrated by pictures, charts, and the articles themselves whenever possible. The course will develop a knowledge of conveniences leading to sanitary conditions in the farm home and to economy of time and energy on the part of farm girls and women. It will demonstrate how such conveniences may be introduced into all the homes at a minimum cost; how many simple home-made inventions may be substituted for the much more costly commercial outfits.

The following subjects will be included: Water-works systems; lighting systems; labor saving conveniences in the kitchen; cement walks; screens in doors and windows.

Farm Dairying. A practical course in Farm Dairying, covering five periods, two hours each, will be given as follows:

1. Milk; composition and treatment for household use.
2. Cream; its separation from milk and treatment for butter making.
3. Butter; how to make it of the best quality and secure the greatest yield at the least expenditure of labor and for equipment.
4. Dairy Products; scoring and marketing.
5. Testing milk and its products for fat, acidity and quality.

Home Orchards. This course consists of a general discussion of fruits and varieties, soils and fertilizers as well as cultural methods required. Special attention is given to the home fruit acre.

ANNUAL MEETINGS OF FARMERS' ORGANIZATIONS

The Georgia Dairy and Live Stock Association, the Georgia State Horticultural Society, and the Georgia Breeders' Association hold their annual meetings at the College in January. An attempt is

made to reach and serve the interests of all classes of citizens engaged in agriculture. The attendance continues to grow. Since those engaged in horticulture or dairying are often interested in both as well as general farming, the joint meeting of the three associations present many advantages to the members and saves both time and money. By meeting at the College, these organizations are afforded an opportunity to study the progress made in agricultural science during the year and to confer with experts. The student body is greatly benefited by the opportunity afforded for personal contact with practical men who are making a success of the work in which they are engaged. Thus several important purposes are served through the arrangement of a joint conference of the organizations chiefly concerned in promoting the welfare of Georgia farmers.

The advisability of holding such a general conference is shown by the fact that the fertility of our lands is decreasing, the depredations of insect pests and plant diseases are becoming greater each year, and the purchase and use of fertilizers more abundant. How shall the farmer obtain the needed information with reference to these matters save through some such clearing house as the State College of Agriculture?

Education measures the success and progress of a nation. We have neglected agricultural education in America because of our marvelous natural resources. But nature has rebelled, and now we must inaugurate crop rotations and give greater attention to the development of live stock.

CO-OPERATION

Under the Smith-Lever bill the College of Agriculture and the United States Bureau of Agriculture enter into an agreement whereby the College becomes the directing head for the development within the state of enterprises contemplated by the bill. To this end coöperation with the States Relations Committee of the United States Department of Agriculture is maintained. Cordial coöperation is also maintained between the College and various bureaus of the United States Department of Agriculture in carrying on club work among the boys and girls, field work in dairying, beef production, educational work in hog cholera serum, soil surveys, farm management, and marketing. Workers in these various lines belong to the College staff and conform to plans and policies outlined by the institution for the development of the agriculture of the state. Effective coöperation with the State Superintendent of Public Instruction and through him with county school superintendents and individual teachers in organizing and maintaining the boys' and girls' clubs, is obtained.

Close coöperation is maintained with the State Department of Agriculture including its distribution of hog cholera serum and work in tick eradication. Coöperation exists between the College and the State Experiment Station, the State Board of Entomology, the Georgia Dairy and Live Stock Association, the Georgia State Horticultural Society, the Georgia Breeders' Association, the State Fair Association, the Atlanta Corn Show and other fair associations, the Farmers' Union, farmers' organizations in general, boards of trades, cooperative marketing movements and other organizations where the services of the College are accepted.

More than $70,000 is being donated annually by business men, commercial and industrial organizations of Georgia for carrying on the extension demonstration work of the College. In this respect Georgia is a leader. The state has opportunity for much greater advancement if she fully avails herself of the opportunities offered by the Smith-Lever bill.

EXTENSION TEACHING

It is the purpose of the College of Agriculture to aid all educational activities which are being carried on in the state. The fulfillment of this purpose is one of its greatest obligations to the state and every effort will be made to further the work of extension teaching. Two great ends are to be subserved by work of this character. First, the systematizing of the educational activities of the state and the raising of these to a higher level of efficiency. Second, the dissemination of useful knowledge which has accumulated in recent years, but is not generally appreciated as it should be, and which cannot be brought to the attention of adults and those remotely situated from the College save through extension agencies.

Recognizing the importance of this character of work, the General Assembly of Georgia during the annual session 1913, re-appropriated $40,000 to the State College of Agriculture to be used for extension teaching, providing that $15,000 of the above amount be used for the organization of boys' and girls' clubs. In addition to the state appropriation, the federal government under the Smith-Lever act, appropriated $10,000 as an annual appropriation beginning July 1st, 1914. Under the same act of Congress an increased amount becomes available for extension teaching and farm demonstration work, providing the state appropriates an equal amount.

In accordance with this action of the state legislature and the federal government, the board of trustees has organized the work of the several departments constituting the College, so that they can carry on their proper share of extension work. Through the extension department the extension schools, educational trains, farmers' meetings and miscellaneous conferences are organized and directed.

Every member of the college staff gives some of his time and effort to extension activities.

The department of agronomy is utilizing a series of test plats on different types soils of the state to secure data concerning their principal defects, and what forms of fertilization and crop rotation are best adapted to build them up. This department maintains a twenty-acre field for the purpose of carrying on investigations relative to corn and cotton breeding, crop rotations, fertilizers and soil management. This information is invaluable to the people of the state and is distributed in bulletin form at the meetings held by the extension service.

The traveling field representatives of the department of agronomy are also engaged in advising the farmers relative to the improvement of certain strains of cereals, corn and cotton which are being developed through seed selection and hybridization.

The department of agricultural chemistry has undertaken a physical survey of several counties and is making analyses of all the type soils found therein. A close coöperation of necessity exists between the departments of agronomy and agricultural chemistry in this work, which is of the most fundamental character, since it means ascertaining the soil deficiencies and determining the methods by which these can be supplied. Several men are employed by this division.

The department of animal husbandry is carrying on work along several lines. First, it is coöperating with farmers in the purchase and dissemination of improved breeds of livestock so that breeding centers may be established in a number of communities. Secondly, experts are advising dairy farmers as to the best types of barns and silos to erect, and supervising the feeding and management of a number of dairy herds as well. A number of experts are engaged in the work of establishing better live stock on the farms in the state, by assisting beginners in the management of dairy and beef cattle herds. Particular attention is being given to developing the live stock industry in tick-free territory. On the College farm more than 200 head of live stock are maintained for the purpose of securing data and information to be distributed in bulletin form and at extension schools and other meetings throughout the state.

Two instructors in poultry husbandry have charge of this special line of work and they are prepared to advise with all interested in this important industry. These men are organizing and developing the poultry club work in various counties of the state.

The department of horticulture is carrying on extension work in connection with the peach, apple, pecan and trucking industries. Demonstrations in spraying, pruning and orchard heating and other practical problems are given. This department is also supervising

the work of the county demonstration agents in developing the trucking industry in a number of south Georgia counties.

The department of farm mechanics assists farmers in the preparation of plans for farm houses, barns and other outbuildings necessary on an up-to-date farm.

The department of cotton industry is distributing seed of the Sunbeam variety which is proving highly resistant to anthracnose, and is engaged in investigating many vital problems associated with the more economic production of cotton in the state.

The department of veterinary medicine is manufacturing hog cholera serum. It is also teaching farmers the methods of inoculating hogs with the serum and one man does nothing else but aid owners of hogs in controlling hog cholera by the use of serum and sanitary measures.

It is possible through the use of serum to largely control the destruction wrought by hog cholera. Its importance, therefore, needs no further emphasis. This department is also coöperating in every possible way with those agencies which are endeavoring to eradicate the cattle tick, and to control many diseases which cause serious loss to Georgia farmers.

Some of the most effective work done by the College is through the organization of the Boys' Corn Clubs, Girls' Canning Clubs and Boys' Pig Clubs. Departments are maintained for this service, and the interest has grown to such extent that a number of special agents devote their entire time to this work. This constitutes one of the most important lines of activity being carried on through the extension work of the College.

The various departments enumerated act as a clearing house of agricultural information for Georgia farmers.

During the year, 1475 meetings were held, and 207,116 reached exclusive of those served by county agents or through correspondence or by distribution of bulletins or other printed matter. Over 163,172 miles of travel were entailed to render this service. The work includes the organization of 5 four-day extension schools attended by 5,332 people; 61 summer farmers' meetings attended by 19,642 people; 917 corn club and farm demonstration meetings with an attendance of 105,593 people; 388 girls' canning club meetings with an attendance of 19,400 people; two teachers' institutes, attended by 225 teachers; 56 miscellaneous meetings attended by 15,554, and 40 live stock meetings attended by 1,570 people. In addition about 25,000 people viewed the educational exhibits of the College at the State Fair at Macon, there were 15,000 people to view the exhibits in connection with the extension schools and over 500 people attended the meetings of the various state organizations held at the College.

It is believed that one of the most efficient ways by which the farmers can be served is through the organization and promotion of extension schools. Five four-day extension schools were held during the spring of 1915, at the following places: Ashburn, Dublin, Sparta, Macon and Euharlee. Considering the number of consecutive lectures that were given in each community the total attendance of 5,332 shows the appreciation of the farmers for this class of extension teaching. The people of each community put up a minimum guarantee of paid-up, registered students before the school was given. These registrations helped in part to defray the expenses. The nature of the schools was such that it made it possible to reach only a few communities with this form of extension work.

The response to this work has been most gratifying, and judging from the expressions of those in attendance, it is the most satisfactory methods of reaching farmers that has yet been devised. The demand for these schools has been such as to make it clear that this work should be developed as a permanent project. These schools are conducted in a thoroughly practical manner. Among the subjects discussed are the mixing and application of fertilizers, soils and soil cultivation, tillage and tillage implements, the selection and improvement of seed corn and cotton, diseases of live stock, dairying, poultry husbandry, fruit and truck problems, spraying and orchard management and the feeding and care of live stock. A car of live stock and a car load of exhibits and equipment were carried to the schools during the past season. The exhibits, charts, models, scientific apparatus and other material helped to present the subject matter in a graphic and practical manner, so practical indeed that many farmers who have attended the schools found it feasible to put the suggestions made by the instructors into practice. The car of live stock helped wonderfully in acquainting the farmers with the different breeds and did a vast amount of good in giving the farmers a desire for better farm animals. The value of a system of extension teaching of this character can never be accurately estimated, but those who have seen the marvelous improvement in farm practice which has followed in the wake of limited effort in this direction realize fully what a systematic extension bureau may accomplish in stimulating an interest in better methods of farming.

Another feature emphasized by the extension department is the organization of boys' and girls' industrial clubs. The boys are encouraged to grow corn and raise pigs under specific rules and regulations laid down by the College, and the girls to organize canning and poultry clubs and to take a greater interest in cooking and sewing. In this work the extension department has had the sympathetic coöperation of the great majority of the county school commissioners, the Farmers' Union, the State Department of Agri-

culture, business organizations and a number of congressmen. Liberal prizes have been offered by a number of organizations and individuals. Through the organization of these clubs the attention of the boys and girls is being directed to a more thorough appreciation of the possibilities of the soil, the need of using fertilizers and acquiring a knowledge of plant and animal life. In other words, agricultural instruction of a fundamental character is being introduced into the schools of the state and the fact that the boys have often been able to produce 100 bushels of corn per acre, has demonstrated the economic value of work of this character.

Speakers are sent from the College to address farmers' gatherings or to discuss subjects of special interest to a given community. The officers of the College are working in coöperation with the county school commissioners, and lecturers are sent to teachers' institutes for the purpose of discussing ways and means by which instruction in agriculture in the common schools are provided by law, may be inaugurated. No service can be rendered the people of the state at this time more important than that of fostering the teaching of the underlying principles of agriculture in the public schools.

Another feature of extension work which the College is fostering is correspondence with farmers. Thousands of letters are annually answered, giving definite information relative to fertilizers, soils, crops, care and management of live stock, orchards and gardens. Every farmer in the state is invited to take advantage of the free information afforded by correspondence. In this way at the cost of a two-cent stamp, any individual may obtain information worth a great deal of money to him.

The College stands ready to assist every organization and individual entitled to its service.

SUMMER FARMERS' MEETINGS.

Sixty-one Summer Farmers' Meetings were held during the past year at the following places: Pinehurst, Ashburn, Moultrie, Sylvester Park, Cairo, Bainbridge, Colquitt, Edison, Ft. Gaines, Springvale, Bronwood, Leesburg, Lumpkin, Cusseta, Gentian, Reynolds, Macon, Forsyth, Newnan, Jones Hill, Dallas, Cedartown, Powder Springs, Canton, Jasper, Crabapple, Decatur, Mt. Vernon, Mt. Berry, Chula, Joice, Valdosta, Atwood, Lake Beatrice, Nicholls, Walkersville, Woodbine, Odum, Hazelhurst, Cedar Crossing, Manassas, Soperton, Browndale, Tingle, Sandersville, Gibson, Millhaven, Sardis, Sparta, Milledgeville, Eatonton, Washington, Lincolnton, Monroe, Jackson, Inman, Dry Pond, Stinchcomb's Church, Bowersville, Lavonia, Eastanollee.

Institutes were offered to the remaining counties, but for various

reasons satisfactory arrangements could not be made for the meetings.

From one to three speakers were sent to the following places where either farmers' meetings or educational rallies were held:

Watkinsville, Atlanta, Donaldsonville, Bainbridge, Macon, Monroe, Washington, Greensboro, Winder, Reidsville, Gainesville, Barnesville, Clarkesville, Royston, Rome, Griffin, Hartwell, Milledgeville, Ashburn, McRae, Dublin, Sparta, Jackson, Madison, Euharlee, Fort Gaines, Moultrie, Cuthbert, Fitzgerald, Quitman, Boston, Clayton, Covington, Commerce, Decatur, Tifton, Montezuma.

REGISTER OF STUDENTS, 1914-1915

MASTER OF SCIENCE IN AGRICULTURE.

Blackburn, Robt. Erwin---Athens.
Buchwald, Charles ---Brooklyn, N. Y.
Goodwin, Ozias Talcott---Athens.
Tabor, Paul ---Danielsville.
Young, Yungyen ---Washington, D. C.

BACHELOR OF SCIENCE IN AGRICULTURE.

Senior.

Bassett, Noble Paul---Ft. Valley.
Birch, George Snider, Jr.---Macon.
Burns, William Arnold---Commerce.
Burrage, Clarence Hill---Demorest.
Campbell, James Philander---Athens.
Chandler, Farish Carter Tate---Commerce.
Corley, Otis Herman---Athens.
Davis, Charles Barney---Tennille.
Davis, Joseph Joel---Tifton.
Firor, George Henry---Athens.
Fort, William Ray---Morrow.
Gowan, Charles Lee---Athens.
Gunn, John McKenzie---Cuthbert.
Hastings, William Raymond---Atlanta.
Head, Broadus Jennings---Clermont.
Jones, Guy Rudolph---Norcross.
Jones, Percival Conally---Midville.
Little, Bird ---Duluth.
Lufburrow, Burley Mathew---Oliver.
Maddux, Henry Towns---Culloden.
McConnell, Bright ---Commerce.
Pedrick, Scott Hicks---Quitman.
Ragsdale, Elmo ---Cornelia.
Stanley, William Kinnebrew---Quitman.

Ward, Frank Crawley---Lumpkin.
Winn, Courtland Simmons, Jr.---Atlanta.
Woodall, James Fletcher---Woodland.
Wright, Homer, Jr.---Grantville.
York, Gustavus ---Quartz.

Junior.

Andrews, Hugh Ector---Milledgeville.
Barlow, William Wallace---Cochran.
Brown, Harry Lowrance---Flowery Branch.
Bush, Newton Gale---Barnesville.
Collins, Morris William Hallowell---Atlanta.
Collins, William Olin---Douglasville.
Dennis, Joseph Littleton---Atlanta.
Frye, Henry Lee---Clarkesville.
Harvey, Harlow Williamson---Athens.
Hasty, William Dozier---Chickamauga.
Hill, Pope Russell---Toccoa.
Lanier, Fleetwood ---Athens.
Metcalf, Alston Mitchell---New York, N. Y.
Moon, Steve Clay---Athens.
Morgan, John Guy---Mansfield.
McWhorter, George Ellsworth---Savannah.
Pessin, Louis ---Athens.
Purcell, Jones ---Lavonia.
Purdom, John Mason, Jr.---Blackshear.
Veatch, Curry LaFayette---Trion.
Wilder, Cecil Norton---Pelham.

Sophomore.

Alexander, Emory DeWitt---Lafayette.
Braxton, Elliott Meese---Newport News, Va.
Brown, Herman Judson---Elberton.
Brown, Walter Scott---Robertstown.
Coffee, John Tennith---Eastman.
Curtis, William Neel---Athens.
David, Frank Columbus---Columbus.
Davidson, Francis Florence---Shady Dale.
Dortch, Willis Reaves---Kerrs, Ark.
Drexel, Eugene Paul---Tifton.
Everett, John Estes---Bullards.
Foy, Inman Murphy---Statesboro.
Garner, Charles Gordon---Granite Hill.
Hall, Orville Duane---Carnesville.
Hillis, William Doughty---Girard.
Jewett, Howart Cassitt---Macon.
Jones, William Clyde---Mansfield.

Kemp, George Guy_____Marietta.
Kemp, Hoyle Newton_____Powder Springs.
Koch, Charles August, Jr._____New York, N. Y.
McDougald, Daniel Outland_____Statesboro.
MacIntyre, William Fraser_____Thomasville.
Nicholson, John Walter_____Athens.
Paddock, David Fleming_____Brooklyn, N. Y.
Petree, Russell Rano_____Powder Springs.
Saye, George Paul_____Tate.
Sealy, James Robert_____Edison.
Shippen, Frank Truman_____Ellijay.
Skelton, Emmett Arnold_____Hartwell.
Smith, LaFayette Richmond_____Clayton.
Sorrells, William Holman_____Athens.
Timberlake, Lewis Rumph_____Marshalville.
Upshaw, Daniel Hess_____Monroe.
Watson, Oscar David _____Loganville.
Wingate, Henry Lynwood_____Camilla.

Freshman.

Abbott, Howard Williams_____New York, N. Y.
Alverson, Spurgeon Earl_____Sugar Valley.
Beck, John James_____Atlanta.
Bedinger, Robert Daniel_____Atlanta.
Benford, Jesse James_____Bowdon.
Bennett, Joseph Campbell_____Brunswick.
Bexley, James Millard_____Moreland.
Bradberry, Webster Lee_____Athens.
Brinson, Lucian Sidney_____Zeigler.
Bussey, Arthur Stewart_____Waverly Hall.
Cabaniss, Emmett Overton_____Maxeys.
Camp, Jay William_____Douglasville.
Clegg, Wyatt Arnton_____Tifton.
Cook, Robert Word_____Fairburn.
Craig, Samuel_____Lawrenceville.
Crump, John Herschel_____Carnesville.
Dodd, Glover Frank_____Kingston.
Dodd, Harold Augustus_____Kingston.
Dodd, Jere _____Kingston.
Dortch, Robert Lee_____Kerrs, Ark.
Ethridge, Robert Loy_____Auburn.
Everett, Taylor Lamar_____Bullards.
Foster, William Ernest_____Carrollton.
Gilmore, John Duggan_____Warthen.
Gregory, H. _____Constantinople, Turkey.
Hardman, William Wallace_____Crawford.

Harris, Ray Carter---Wrens.
Hodgson, Harold Bishop---Athens.
Hodgson, William Albon---Athens.
Hopper, Lehman Edgar---Woolfolk.
Howell, Moses Elijah---Canton.
Hutchins, Joshua Cornelius, Jr.---Athens.
Lee, Edward Morgan---Warrenton.
Logan, Harry Brown---Rome.
Maddux, Jarrel Oliver---Culloden.
May, Albert Lee---Quitman.
Miller, Charles Cox---Richland.
Mobley, Charles Watson---Barnesville.
McLemore, Carr ---Mt. Vernon.
McRee, Joseph Leonard---Watkinsville.
Neville, Walter Edward---Rabun Gap.
Odum, James Edward---Covington.
Plemmons, John Gordon---Ellijay.
Porter, John Lee, Jr.---Atlanta.
Powers, Thomas Stallings---Newnan.
Putney, William Moses---Plainville.
Roberts, Ben Hill, Jr.---Valdosta.
Robison, Henry Omer---Athens.
Roesel, Theodore Frederick---Augusta.
Scharpton, Vernie Oliver Watson---Winder.
Scheer, George Moses---Atlanta.
Sidberry, Hollis Will---Ashton, N. C.
Skinner, Louis Irwin---Martinez.
Sorrells, Judge Clifford---Monroe.
Starr, David Homer---Atlanta.
Steele, Thomas William---Scott, Ark.
Stevens, John Law---Valdosta.
Still, Dennis David---Loganville.
Striplin, Erastus Fain---Funston.
Wellborn, Ernest Evans---Atlanta.
Wheeler, Collerson Wells---Reidsville.
Williams, Britain Walton---Hamilton.
Young, Daniel Kelley---Ty Ty.

ONE YEAR.

Arnold, Kemp Chamber---Statham.
Burson, James Franklin ---Statham.
Cooksey, James Samuel---Omega.
Cooper, William Oscar, Jr.---Lawrenceville.
Cross, Fred Lyon---Colquitt.
Foster, Benjamin Frederick---Dalton.

Hautman, York ---------- Dawson
Holden, Howard Lewis ---------- Athens.
Holmes, Roy Tabor ---------- Ranger.
Long, Walter S. ---------- Rome.
Massey, Alton Hood ---------- Commerce.
Rawls, Eugene Lawrence ---------- Butler.
Rodgers, Ezekiel Quinton ---------- Barnesville.
Rowan, Robert Cantrell ---------- Atlanta.
Spierling, Charles ---------- Weehawken, N. J.
Stewart, George Calvert ---------- Brunswick.
Wilson, Robert Newton ---------- Eatonton.
Wyatt, Joseph Christopher ---------- Menlo.

SPECIAL.

Blumenthal, Isadore ---------- Savannah.
Hyman, Claude Stanley ---------- New York, N. Y.
McLaws, Uldrick Huguenin ---------- Savannah.
Perry, John Iverson ---------- Atlanta.
Staten, Jack ---------- Valdosta.

SUMMER COTTON GRADING COURSE.

Dortch, W. R. ---------- Kerrs, Ark.
Edwards, W. W. ---------- Shellman.
Fay, J. D. ---------- Pelham.
Greene, W. D. ---------- Ben Hill.
Hamby, E. H. ---------- Cuthbert
Harris, Dan C. ---------- Sandersville.
Hodge, Earl ---------- Fitzgerald.
Johns, J. B. ---------- Reidsville.
Johnson, C. F. ---------- Summit.
Kicklighter, E. A. ---------- Glennville.
Norman, A. L. ---------- Norman Park.
Price, A. C. ---------- Bronwood.
Rachels, W. F. Jr. ---------- Sandersville.
Rowan, R. C. ---------- 118 Simpson, Street, Atlanta.
Vandiver, J. S. ---------- Jefferson.

FARMERS' SHORT COURSE.

Boone, H. B. ---------- Maysville, Ga.
Bussey, D. N. ---------- 942 Greene Street, Augusta, Ga.
Carpenter, Adelbert ---------- Cave Springs, Ga.
Childs, W. S. ---------- Omaha, Ga.
Collins, W. M. ---------- Fairburn, Ga., R. D. No. 2.
Collins, F. B. ---------- R. No. 5, Athens, Ga.
Conwell, J. E. ---------- Lavonia, Ga., R. D.
Cook, Roy ---------- Fairburn, R. 2.
Dearing, A. P. ---------- Athens, Ga.

Doster, Reid ---------- Rochelle, Ga.
Duncan, A. J. ---------- Clayton, R. No. 1.
Estes, C. T. ---------- Gainesville, Ga.
Gillespie, J. P. ---------- Blairsville, Ga.
Harp, H. R. ---------- Inman, Ga.
Harris, W. P. ---------- Columbus, Ga.
Hill, T. B. ---------- Athens, Ga.
Jordan, C. H. ---------- Monticello, Ga.
Killingsworth, E. C. ---------- Fort Gaines, Ga., R. D. No. 1.
Land, J. A. ---------- Clayton, Ga., R. D. No. 1.
Lipot, Sigel ---------- Evens, Ga.
Lewis, S. L. ---------- Tifton, Ga.
Newsom, I. L. ---------- Eatonton, Ga., R. D. No. 2.
Newton, E. B. ---------- Halcyondale, Ga.
Orr, C. M. ---------- Fort Valley, Ga.
Rast, J. E. ---------- Pidcock, Ga.
Saylor, C. H. ---------- Athens, Ga.
Suddeth, W. B. ---------- Winterville, Ga.
Starr, H. H. ---------- Crawfordville, Ga., R. No. 4.
Thomson, L. D. ---------- 123 Peachtree St., Atlanta, Ga.
W. O. Walton ---------- Lumpkin, R. D. No. 4.
Whatley, J. H. ---------- Reynolds, Ga., R. D. No. 4.

COUNTY AGENTS' COURSE.

Asbury, T. L. ---------- Crawfordville.
Baker, Eugene ---------- Monroe.
Ballard, R. L. ---------- Ashburn.
Boland, M. G. ---------- Hawkinsville.
Boyett, W. J. ---------- Morris Station.
Bradford, Dr. Wm. ---------- Cedartown.
Bryant, C. A. ---------- Carnesville.
Burdette, J. Luke ---------- Washington.
Campbell, J. Phil ---------- Athens.
Cassels, G. T. ---------- Fort Gaines.
Cown, S. M. ---------- Union City.
Cox, C. H. ---------- Jasper.
Creel, J. E. ---------- Powder Springs.
Cromartie, H. L. ---------- Mt. Vernon.
Culpepper, C. B. ---------- Vienna.
Cunningham, G. V. ---------- Tifton.
Davis, L. C. ---------- LaGrange.
Dillard, E. C. ---------- Montezuma.
Dowling, S. L. ---------- Valdosta.
Eunice, Geo. B. ---------- Douglas.
Foster, C. L. ---------- Dalton.

Foster, J. H.----------Rome.
Garrison, F. D.----------Clarkesville.
Giles, J. K.----------Athens.
Griffin, W. H.----------Nashville.
Halliday, W. T.----------Lumpkin.
Harp, H. R.----------Fayetteville.
Harper, O. T.----------Reidsville.
Harris, H. L.----------Energy.
Hart, J. F.----------Union Point.
Hendricks, J. W.----------Sardis.
Hubbard, C. S.----------Canton.
Hunter, R. S.----------Decatur.
Hutcheson, R. O.----------Danielsville.
Jackson, E. T.----------Carrollton.
James, C. M.----------Columbus.
Johnson, J. A.----------Cordele.
Kent, R. H.----------Bronwood.
Martin, C. E.----------Hilton.
Mathews, J. O.----------McRae.
Middlebrooks, W. G.----------Walden.
Parker, T. L.----------Alpharetta.
Parrish, H. H.----------Albany.
Pittman, J. T.----------Bainbridge.
Pitts, D. J.----------Bowman.
Rast, W. W.----------Pidcock.
Rogers, Roy ----------Baxley.
Rountree, Ridge ----------Camilla.
Shedd, J. P.----------Jesup.
Sherard, S. H.----------Sandersville.
Shirley, C. V.----------Reynolds.
Tyre, J. B.----------Dublin.
Ward, P. H.----------Cairo.
Watson, L. S.----------Rochelle.
Whatley, W. F.----------Brunswick.
Wiley, H. G.----------Toccoa.
Wiley, T. B.----------Blackshear.
Woodruff, J. G.----------Athens.
Worsham, H. L.----------Flovilla.
Yates, W. W.----------Temple.

HOME ECONOMICS COURSE.

Allman, Mrs. Pearl M.----------Toccoa.
Andrews, Mrs., ----------5th District Agri. School, Monroe.
Bennett, Mrs. Annie----------Jesup.
Bethea, Miss Maggie----------Pitts.

Blackwell, Mrs. Josie---Swainsboro.
Bond, Mrs. E. G.---Columbus.
Burton, Miss Jessie---Cartersville.
Butner, Mrs. Mary E.---Jackson.
Clark, Mrs. Tassie O.---Richland.
Cliatt, Miss Rosalie---Danburg.
Cox, Mrs. C. H.---Jasper.
DeLoache, Mrs. E. T.---Millen.
Dickson, Miss Lela M.---Fayetteville.
Floyd, Miss Woffie---Calhoun.
Foster, Miss Alma---Dalton.
Frankum, Miss Caroline---Martin.
Fulghum, Mrs. F. A. D.---Davisboro.
Garner, Miss Ruth---Cedartown.
Griffin, Miss Bessie---Nashville.
Johnson, Miss Nola A.---Broxton.
McLucas, Miss Margaret---Baxley.
Nelson, Mrs. J. P.---Oglethorpe.
Owens, Miss Mary---Ashburn.
Pittman, Mrs. H. P.---Bainbridge.
Ridley, Mrs. B. V. B.---Zebulon.
Rolston, Mrs. C. J.---Macon.
Stokes, Mrs. Mary B.---Valdosta.
Wesley, Miss Amy---Lithonia.
Wiley, Mrs. T. B.---Blackshear.

CORN CLUB BOYS' SHORT COURSE.

Addington, S. G.---Morganton.
Allred, Luther---Jasper.
Allred, Clarence---Jasper.
Allred, Arthur---Jasper.
Ayers, Henry---Gabbettsville.
Bacon, Earl---Willie.
Balkcom, I. L.---Quitman.
Barnett, Hobson---Rebecca.
Bassett, Heard---Abbotsford.
Bell, Ernest---Cartersville.
Bennett, Leon---Coffee.
Biles, Jesse---Valdosta.
Borders, Jesse---LaGrange.
Bowden, H. M.---Raleigh.
Brock, Charley---Roopville.
Brooker, Judson C.---Varnell Station.
Broome, Howard---Culverton.
Brown, Comer---Elberton.

Canady, Leon ---------- Soperton.
Cantrell, Grady ---------- Dallas.
Carter, Earl ---------- Lake Park.
Chancey, Henry ---------- Bristol.
Cheek, King ---------- Bowersville.
Clarke, McKinley ---------- Alamo.
Clarke, Eugene ---------- Lithonia.
Cliatt, Guy ---------- Nashville.
Clifton, William ----------
Colquitt, James ---------- Cedartown.
Conger, Geo. G. ---------- Tifton.
Conger, Johnnie ---------- Tifton.
Cornelius, Ward ---------- Homerville.
Creel, G. Ware ---------- Valdosta.
Crowder, M. Lucien ---------- Kensington.
Daniel, Thos. D. ---------- Nashville.
Daniel, James ---------- Ashburn.
Darby, Oliver ---------- Lyons.
Darnell, Hardy ---------- White Plains.
Davidson, Sam ---------- Gabbettsville.
Dickinson, John ---------- Monroe.
Dillard, Eugene ---------- Cusseta.
Dixon, Bennie ---------- Blackshear.
Dodson, Lewis ---------- Flovilla.
Dorough, Otis ---------- Vienna.
Dorsey, J. C. ---------- Nicholls.
Dowdy, Luther ---------- Rockingham.
Downing, Burton ---------- Hahira.
Downing, Walter Lee ---------- Dasher.
Drexler, Frank ---------- Fitzgerald.
Dubbery, Theo. M. ---------- Baxley.
Dunkin, J. Howard ---------- Cedartown.
Dunn, Frank ---------- Williamson.
Dunn, Leonard ---------- Rockingham.
Durham, Ennis ---------- Bainbridge.
Dyer, Stonewall ---------- Newnan.
Edwards, Robt. ---------- Cuthbert.
Eley, Watson ---------- Dickey.
Elrod, Julius ---------- Commerce.
Fincher, Lawrence ---------- Jackson.
Fountain, J. W., Jr. ---------- Reeves.
Freeman, Joe ----------
Freeman, Clifford ----------
Fussells, Matthew ---------- Wray.
Glass, Curtis ----------

Garrison, Sock ---------- Cobbville.
Garrison, Willie ---------- Cobbville.
Gary, Pat H. ---------- Nashville.
Giddens, Ben ---------- Nashville.
Haire, Lester ---------- Bristol.
Hale, Thomas ---------- Jackson.
Halloway, Olin ---------- Andersonville.
Harp, Joseph ---------- Omega.
Harper, Mitchell ---------- Ambrose.
Harvey, Jarvis G. ---------- Jakin.
Hasty, Gordon Lee ---------- Chickamauga.
Hill, Monroe ---------- Oglethorpe.
Hollis, Butter ---------- Tifton.
Hugh, Walter ---------- Nashville.
Hugh, Charley ---------- Kennedy.
Hutchins, Humphrey W. ---------- Auburn.
Jackson, Evans ---------- Madison.
Jones, Walter ---------- Thunder.
Johns, John Paul ---------- Toccoa.
Johnson, B. Lamar ---------- Screven.
Johnson, Ralph ---------- Baxley.
Johnson, Linton ---------- Dasher.
Kennedy, Charles ---------- Dawson.
King, Arthur ---------- Arnoldsville.
Knabb, Col ---------- Monia.
Knight, Edwin L. ---------- Valdosta.
Land, Clyde ---------- Felton.
Lee, John ---------- Carrollton.
Lester, Frank ---------- Hiram.
Lowe, Clyde ---------- Felton.
Lunsford, Worthy ---------- Porterdale.
Mayfield, Orin ----------
Miller, Myrick ---------- Walden.
Miles, Warren ---------- Baxley.
Mincey, Leslie ---------- Baxley.
McCranie, June ---------- Sparks.
McDonald, Hosea ---------- Hahira.
McElmurray, Clarence ---------- Rebecca.
McMillan, James A. ---------- Alma.
Newton, Clinton B. ---------- Elza.
Nichols, Curtis ---------- Rome.
Orr, Guy B. ---------- Smithville.
Parker, Robert ---------- Parkwood.
Parker, Lewis ---------- Jasper.
Passmore, Cohen ---------- Hahira.

Peeples, Richard ---------- Kingsland.
Phillips, Sam ---------- Quitman.
Phillips, Charlie ---------- Redan.
Prine, Surry G. ---------- Statesville.
Psalmonds, Elmer ---------- Cusseta.
Pye, Elick ---------- Jesup.
Register, Lewis A. ---------- Hahira.
Rentz, Lyman ---------- Naylor.
Ruark, Claud ---------- Bishop.
Russom, Howard ----------
Russom, Horace ---------- Abbeville.
Rutherford, Jacob ---------- Lenox.
Scruggs, Earl ---------- Mowen.
Sellers, Earnest ---------- Graham.
Sims, Minor ---------- Ousley.
Sims, Sam ---------- Ousley.
Simmons, Paul ---------- Oak Hill.
Shirley, Dewitt ---------- Royston.
Snelling, Henry ---------- Danielsville.
Stanfield, Nolen L. ---------- Glennville.
Stewart, Rabon ---------- Mt. Vernon.
Stewart, Sim ---------- Tifton.
Studstill, J. D. ---------- Valdosta.
Surrency, Ernest ---------- Screven.
Swatts, Roy ---------- Whigham.
Sweat, J. Ward ---------- Alma.
Swords, Drem ---------- Fitzgerald.
Tippins, Charles B. ---------- Elliott.
Thompson, Luther N. ---------- Washington.
Thomas, Wallace ---------- Lavonia.
Thornton, Eddie ---------- Buford.
Toole, A. G. ---------- Quitman.
Torrance, W. B. ---------- Milledgeville.
Treadwell, Millford ---------- Cartersville.
Truluck, James ---------- Vienna.
Tucker, J. Memory ---------- Summerville.
Turk, Guy ---------- Abbeville.
Turner, Willie ---------- Nicholls.
Tygant, J. D. ---------- Nashville.
Vickers, Earl W. ---------- Ambrose.
Vickers, George ---------- Pearson.
Ware, Henry Alexander ---------- Metasville.
Watkins, Ernest R. ---------- Jackson.
Webb, Clyde ---------- Hahira.
Wells, Melvin ---------- Jesup.

Wellborn, Weyman ---------- Lithonia.
West, Irby ---------- Cuthbert.
Whatley, Troy ---------- Reynolds.
Wheeler, Fred ---------- Ashburn.
White, Paul ---------- Amity.
Wiggins, Roy ---------- Ringgold.
Williams, Blonnie ---------- Sylvester.

CANNING CLUB GIRLS—SHORT COURSE.

Acree, Gladys ---------- Toccoa.
Banks, Martha ---------- Toccoa.
Barnes, Azzie ---------- Route, 2, Rome
Barron, Lora ---------- Clarkesville.
Bennett, Maude ---------- Baxley.
Biles, Fannie ---------- Valdosta.
Boyd, Jane ---------- Ousley.
Brown, Cora ---------- Rockmart.
Brown, Cornelia ---------- Route 7, Rome.
Brown, Effie Mae ---------- Route 2, Calhoun.
Brown, Elma ---------- Sycamore.
Bryant, Mossie ---------- Dalton.
Byles, Fannie ---------- Valdosta.
Cagle, Jewel ---------- Jasper.
Childs, Josephine ---------- Route 2, Omaha.
Clifton, Alice ---------- Macon.
Collins, Nellie ---------- Route 1, Coosa.
Daniell, Ethel ---------- Cobb County.
Davis, Gertrude ---------- Ayersville.
DeMott, Gladys ---------- Route 2, Hartsfield.
Dobson, Sallie ---------- Sugar Valley.
Fulford, Zettie ---------- Route 1, Blackshear.
Guyton, Maud ---------- Cartersville.
Harper, Lila ---------- Rayle.
Harper, Minnie ---------- Jesup.
Harris, Stella ---------- Energy.
Hendrix, Maggie ---------- Powder Springs.
Hires, Madie ---------- Coffee.
Holcombe, Lola ---------- Toccoa.
Hughes, Mary Belle ---------- Route 3, Cartersville.
James, Mattie ---------- Route 1, Ochlochnee.
Keown, Lucile ---------- Rayle.
King, Aubra ---------- Route 4, Lavonia.
King, Mae ---------- Fender.
King, Mozelle ---------- Upatoie.
Kirkland, Ruth ---------- Swainsboro.
Lane, Ada ---------- Millen.

Lollis, Gladys ---------- Pitts.
Long, Jessie ---------- Route 8, Rome.
Lowe, Claudie ---------- Jasper.
Massey, Clemmie ---------- Columbus.
Maxwell, Ophelia ---------- Route 3, Elberton.
Miller, Mary Nell ---------- Dalton.
Montgomery, Ethel ---------- Madison.
Morgan, Annie M. ---------- Route 1, Decatur.
Mullins, Mary ---------- Route 1, Milner.
Murray, Janie ---------- Route 2, Hartwell.
Myers, Nuel ---------- Route 1, Hartwell.
McGukin, Lucy ---------- Hartwell.
Nunn, Mae ---------- Jesup.
Peterson, Florence ---------- Route 1, Osierfield.
Pitts, Annie ---------- Bowman.
Phipps, Clarice ---------- Dalton.
Ridley, Georgia ---------- Omega.
Robinson, Lucile ---------- Oglethorpe.
Rousie, Ethel ---------- Route 2, Tignall.
Sherrer, Gladys ---------- Washington.
Singley, Nellie ---------- Butts County.
Slade, Mary Lena ---------- Zebulon.
Smith, Leila ---------- Route 2, Bowersville.
Stephens, Lois ---------- Fayetteville.
Strickland, Jessie ---------- Lavonia.
Sullivan, Clyde ---------- Ousley.
Taylor, Lottie ---------- Millen.
Thomason, Stella ---------- Toccoa.
Turk, Mae ---------- Pitts.
Waters, Isabel ---------- Route 1, Blackshear.
Weldon, Lois ---------- Doraville.
Whitehead, Minnie ---------- Route 2, Rome.
Williams, Thelma ---------- Route 3, Sylvester.

SUMMARY OF REGISTRATION.

M. S. in Agriculture	5
B. S. in Agriculture	148
One-year course	18
Special	5
Farmers' Short Course	31
Summer Cotton Grading Course	15
County Agents' Course	60
Home Economics Course	29
Corn Club Boys' Short Course	160
Canning Club Girls' Short Course	70
Total registration	541